

March 21, 2021

Director, Air Enforcement Division U.S. Environmental Protection Agency MC 2242A 1200 Pennsylvania Ave. NW Washington, D.C. 20460	Chief, Environmental Enforcement Section Environment and Natural Resources Division U.S. Department of Justice Box 7611 Ben Franklin Station Washington, D.C. 20044-7611
Director of Litigation Litigation Division, MC-175 Texas Commission on Environmental Quality P.O. Box 13087 Austin, TX 78711-3087	Division Chief Environmental Protection Division Office of the Attorney General of Texas P.O. Box 12548, MC 066 Austin, TX 78711-2548

To Whom It May Concern:

On behalf of Tokai Carbon (Tokai) I am attaching additional information that EPA and DOJ requested during our meeting on March 8, to support the request by Tokai to move certain compliance dates under the Consent Decree for the Borger facility. This request is made pursuant to the Provisions of Paragraph 70 of the Consent Decree. Tokai requests that the compliance date be extended by a number of weeks to account for additional events associated with the extreme temperatures in Texas in February.

The additional substantiation includes:

1. A declaration from the steel fabricator (Southland Steel Fabricators) which details delays caused by the historic cold temperatures in Texas during February and the resulting power outages and transportation delays;
2. Documentation of the Power Distribution Center Building delays due to Texas DOT (transporter of building was Crane Service);
3. Proposal from Haldor-Topsoe for remote assistance during startup of pollution control equipment with Clearview so that we can accelerate the installation of the control equipment even if personnel cannot be physically on site;
4. Remote supervision of acid brick installation. This has been implemented for the past several months; and

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March 21, 2021

Page 2 of 2

5. An updated Gant chart for the project.

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As always, if anyone from the government teams has questions, or needs additional information to evaluate this request, please let me know.

We also wanted to clarify that Tokai is withdrawing its request that the information in this letter and the prior communications be treated as CBI with the exception of one document in this submission that is labeled accordingly.

.Sincerely,

//Suzanne B. Murray//

Suzanne B. Murray
Haynes and Boone, LLP
Direct Phone Number: (210) 978-7433
Direct Fax Number: (214) 200-0710

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251 GREENSBURG STREET | P.O. BOX 219 | GREENSBURG, LA 70441
P: (225) 427-9160 | F: (225) 427-9170 | southlandsteel.com
AN AISC QUALITY CERTIFIED COMPANY

February 17, 2021

Steven Willis
Tokai Carbon CB
Amine Mechanical project
Southland Job: 1020-835

Subject: Force Majeure Event Notice
Purchase Order: CD08-054

Please be informed that Southland Steel Fabricators has experienced a Force Majeure event due to the Winter Storm occurring on 2/14/21 and 2/15/21. See attached State of Emergency declaration for reference.

The power outages, heavy ice, and limited travel have forced the closure of our Greensburg, LA production facility on 2/15/21, 2/16/21, and 2/17/21 and will affect our workforce for the near future. Additionally, our subcontractors and suppliers have experienced similar delays.

At this time we anticipate a 1 week schedule delay. Southland remains fully committed to your project and will keep you informed of progress. Feel free to contact me with any questions.

Sandra M. Walker

Southland Steel Fabricators, Inc
251 Greensburg Street
Greensburg, LA 70441
225-427-9160, ext 263
Sandra.walker@southlandsteel.com

From: [Tran, Duc](#)
To: [Ali, Roshan](#)
Cc: [Bismilla, Riaz](#)
Subject: FW: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540
Date: Monday, March 8, 2021 10:46:42 AM

Roshan,

Below the email chain began from 02/16/20 to yesterday regarding the PDC building.

Duc

From: Jason Rhorer <jrhorer@craneserviceinc.com>
Sent: Saturday, March 6, 2021 5:50 PM
To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>; Rockin JT PCS LLC <rockinjtpcs@yahoo.com>; Homer Aikin <haikin@craneserviceinc.com>; Archino, Joseph A. <JArchino@tokaicarboncb.com>
Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping <shipping@volta-us.com>
Subject: [EXTERNAL] Re: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

This Message originated outside your organization.

Good evening, Everyone.

Transport Team made it to Waco, TX. today. Great job Team!! Thank you!

Team will be back on the road at sunrise again tomorrow to make as many miles as possible.

Thanks again, Guys. Great job.

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com



On Mar 6, 2021, at 6:09 AM, Jason Rhorer <jrhorer@craneserviceinc.com> wrote:

Good morning, Folks.

Transport Team is past Cleveland and moving forward. Equipment is in good condition and the men are motivated.
Big thank you to all of them!

I will continue to update as progress throughout the weekend.

Have a great day!

On Mar 5, 2021, at 2:15 PM, Jason Rhorer <jrhorer@craneserviceinc.com> wrote:

Good afternoon, Folks.

The Transport Team made it to Cleveland, TX. today before they ran into a paving operation that was not there when the survey was completed and the route approved. TXDOT didn't know it was happening either. The Team found a route around the issue and the amended route was submitted to TXDOT. I am waiting for response from them now.

The Team will shut down there and plan to move forward in the morning. The next available parking is roughly 100 miles away from where they are now and they will not make it there before dark.

I will forward the amended permit as soon as it arrives and update everyone again. You will see updates Saturday and Sunday as well so you all know where the transport is at.

Thank you all for your hard work, patience and professionalism.

From: Jason Rhorer <jrhorer@craneserviceinc.com>
Sent: Thursday, March 4, 2021 8:07 AM
To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>; Rockin JT PCS LLC <rockinitpcs@yahoo.com>; Homer Aikin <haikin@craneserviceinc.com>; jarchino@tokaicarboncb.com
Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping <shipping@volta-us.com>
Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Good morning, Folks!

The Transport Team is all set to roll. The pilot cars, bucket trucks and police escorts are ready for the upcoming days. There are several things that need to happen on this trip and Jamie and Rick from RockinJT will be coordinating on the road to make sure these happen. We are not out of the woods yet, my friends but, we are on the way. The Transport Team will be doing all they can to be efficient and save money at every chance. Thank you all for working so diligently.

Be safe, be professional and make sure we all work together as a team.

Thanks again, Everyone and have a great day!

Jason Rhorer

Logistics and Project Manager
T: [505-877-1100](tel:505-877-1100)
M: [303-726-5985](tel:303-726-5985)
jrhorer@craneserviceinc.com

<image001.jpg>

From: Wright, Brandon <BWright@tokaicarboncb.com>
Sent: Thursday, March 4, 2021 5:10 AM
To: Jason Rhorer <jrhorer@craneserviceinc.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>; Rockin JT PCS LLC <rockinitpcs@yahoo.com>; Homer Aikin <haikin@craneserviceinc.com>
Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping

<shipping@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Jason,

Follow up on our conversation yesterday.

If all goes well you will be on site Sunday 3/7.

We will have all cleared and ready to trans load and set building in place on Monday 3/8.

Joe Archino will be your contact on site. JArchino@tokaicarboncb.com Please CC him on any updates.

Thanks

Brandon Wright

Manager, Project Construction

Tokai Carbon CB

301 Commerce St., Ste. 500

Fort Worth, Tx 76102

Work (817)-380-5751

Cell (432)-213-8808

BWright@tokaicarboncb.com

<image006.png>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Wednesday, March 3, 2021 4:52 PM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>; Rockin JT PCS LLC <rockinjtpcs@yahoo.com>; Homer Aikin <haikin@craneserviceinc.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping <shipping@volta-us.com>

Subject: [EXTERNAL] RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Mimecast Attachment Protection has deemed this file to be safe, but always exercise caution when opening files.

This Message originated outside your organization.

Good afternoon, Folks!

I am pleased to announce that we have our permit in hand (attached) and will begin transport tomorrow morning.

Transportation Team, please have the hotel print out copies of this for everyone to have a copy in their truck.

Bucket trucks and Police will be on site at 0900.

There are a couple of logistics that will need to be handled in route and we will overcome those when they arrive.

I will keep everyone updated daily as to progress.

Thanks, Everyone!

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image007.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Wednesday, March 3, 2021 6:38 AM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>; Rockin JT PCS LLC <rockinjtpcs@yahoo.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping <shipping@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Good morning, Folks.

RockinJT finished the new route survey late last night. Thank you very much to their team for working so hard towards a solution!

Permit was submitted this morning so we should hear back from them a bit later today.

I will keep you all updated with any new information. Thank you all very much for your patience and professionalism.

Have a great day!

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image008.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Tuesday, March 2, 2021 9:32 AM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>; Rockin JT PCS LLC

<rockinjtpcs@yahoo.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping <shipping@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Hello, Folks.

RockinJT has had their team out most of the night and are continuing this morning, working on getting the route validated. As soon as they complete the survey, we will submit for approval. I was talking to the Lead Clerk at TXDOT and she stated that with the rain that came in first, then the freeze, there is a lot of damage to roads that is causing all the issues with finding an acceptable route out of Houston. RockinJT is working non-stop to find a solution for us.

Brandon, plan for an entire three days of transport from the time the unit leaves Volta. The UPRR has been contacted to be available to move railroad crossing arms in the town of Cleveland.

I will update you all as more news becomes available.

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image007.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Monday, March 1, 2021 9:49 AM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping <shipping@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Good morning, Folks.

Wanted to update you all as to where we are at as of this morning. I just received an email from TX DOT stating that the fourth proposed route has been rejected. They said the route they provided to us before is going to be our "best bet". There were a few issues with that route that I have RockinJT working on ways to get around them. UP Rail Road is being contacted for one of the issues we have for a possible resolution.

I have called off the bucket trucks and police as they were planned to be on site today at 1200.

I will send updates as I get them. Thank you!

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image007.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Friday, February 26, 2021 4:06 PM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping <shipping@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Good afternoon, Folks.

I do not have permit in hand. TX DOT did not complete approval of the route that was turned in this morning. When I talked to them at 1600 TX time, they stated that our permit was next in line to be worked. It is now 1700 and they are closed. TX DOT no longer issues permits over the weekend. I absolutely hate to say it however, we will not be moving anything until Monday now.

I don't have the words to apologize for the way this has proceeded. None of us have had any control over the storm or what it did to TX DOT although, I never anticipated this many issues.

Please back off all bucket trucks, utilities, police until we can have permit in hand. We are looking at two more days of stand by.

If I hear something different in the interim, I will alert everyone right away.

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image007.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Friday, February 26, 2021 5:49 AM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping <shipping@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Good morning, Folks.

RockingJT was out running survey all day yesterday and they were able to get a solid route that will work for all the dimensions we are working with. That survey was submitted this morning at 0500 MT and I will follow up with TX DOT at roughly 0900.

Transport Team, please proceed to the load later this morning and double check it for roading.

Thank you all very much and have a great day!

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image007.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Wednesday, February 24, 2021 9:11 AM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping <shipping@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Morning, Folks.

TX DOT requested a route to be developed to be submitted to them for approval. Jamie Thigpen and her team, have called on her contacts to assist and we are very close to having a route to submit.

I will update you all as new information comes out.

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image008.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Tuesday, February 23, 2021 2:10 PM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping <shipping@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Brandon,

I will take every opportunity to expedite. Jamie at RockinJT is trying to work a solution now.

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image007.jpg>

From: Wright, Brandon <BWright@tokaicarboncb.com>

Sent: Tuesday, February 23, 2021 2:08 PM

To: Jason Rhorer <jrhorer@craneserviceinc.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping <shipping@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Jason,

I understand that this is out of our hands.. Please do all that you can to expedite the building getting on site.

Brandon Wright

Manager, Project Construction

Tokai Carbon CB

301 Commerce St., Ste. 500

Fort Worth, Tx 76102

Work (817)-380-5751

Cell (432)-213-8808

BWright@tokaicarboncb.com

<image006.png>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Tuesday, February 23, 2021 2:00 PM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Shipping <shipping@volta-us.com>

Subject: [EXTERNAL] RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

This Message originated outside your organization.

Afternoon, Folks.

TX DOT is requesting us to provide a new route to them for approval. I have contacted Jami at RockingJT to work with Rick to produce a new route that we will then submit for approval.

Optimistically we may be able to move out on Wednesday however, realistically we are now looking at Thursday or Friday.

I will update as we move forward.

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image007.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Tuesday, February 23, 2021 12:16 PM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Alexander Macnab <alexander.macnab@volta-us.com>; James Pixley <james.pixley@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>; Shipping <shipping@volta-us.com>; Merritt McNeel <merritt.mcneel@volta-us.com>; Dina Arriaga <dina.arriaga@volta-us.com>; Dori Leyba <dori.leyba@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Good afternoon, Folks.

Route permission was not given. I have requested a new route to be generated for approval and survey.

I will update as soon as I get more news.

Thank you and have a great day!

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image007.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Tuesday, February 23, 2021 9:44 AM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Alexander Macnab <alexander.macnab@volta-us.com>; James Pixley <james.pixley@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>; Shipping <shipping@volta-us.com>; Merritt McNeel <merritt.mcneel@volta-us.com>; Dina Arriaga <dina.arriaga@volta-us.com>; Dori Leyba <dori.leyba@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Hello, Folks.

Just got off of the phoner with Harris and Montgomery County Houston DOT. They are working to get the permit approved and sent back to TX DOT for permit issuance.

The gentlemen I spoke to said he would call me back in an "hour or so" to provide an update to me. He stated that they are still digging themselves out of the fallout from the storm.

I will continue to update as the day progresses.

Thank you and have a great day!

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image007.jpg>

From: Wright, Brandon <BWright@tokaicarboncb.com>

Sent: Tuesday, February 23, 2021 6:59 AM

To: Jason Rhorer <jrhorer@craneserviceinc.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Alexander Macnab <alexander.macnab@volta-us.com>; James Pixley <james.pixley@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>; Shipping <shipping@volta-us.com>; Merritt McNeel <merritt.mcneel@volta-us.com>; Dina Arriaga <dina.arriaga@volta-us.com>; Dori Leyba <dori.leyba@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Thanks Jason

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Tuesday, February 23, 2021 7:56 AM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Alexander Macnab <alexander.macnab@volta-us.com>; James Pixley <james.pixley@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>; Shipping <shipping@volta-us.com>; Merritt McNeel <merritt.mcneel@volta-us.com>; Dina Arriaga <dina.arriaga@volta-us.com>; Dori Leyba <dori.leyba@volta-us.com>

Subject: [EXTERNAL] RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

This Message originated outside your organization.

Brandon,

Conservative estimate of the 1st.

I have an email in to TX DOT to check on status. I will keep you all updated as news becomes available.

Thank you very much and have a great day!

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image007.jpg>

From: Wright, Brandon <BWright@tokaicarboncb.com>

Sent: Monday, February 22, 2021 5:45 PM

To: Waheed Rahman <waheed.rahman@volta-us.com>; Tran, Duc <DTran@tokaicarboncb.com>;

Robyn Jones <rjones@craneserviceinc.com>; Jason Rhorer <jrhorer@craneserviceinc.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>;

Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John

Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan

<kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Alexander

Macnab <alexander.macnab@volta-us.com>; James Pixley <james.pixley@volta-us.com>; Hassan

Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>; Shipping

<shipping@volta-us.com>; Merritt McNeel <merritt.mcneel@volta-us.com>; Dina Arriaga

<dina.arriaga@volta-us.com>; Dori Leyba <dori.leyba@volta-us.com>

Subject: Re: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

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Jason,

If your able to move on Wednesday what day will that put the PDC building on site?

Brandon

Sent from my Verizon, Samsung Galaxy smartphone

Get [Outlook for Android](#)

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Monday, February 22, 2021 4:47:50 PM

To: Waheed Rahman <waheed.rahman@volta-us.com>; Wright, Brandon

<BWright@tokaicarboncb.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones

<rjones@craneserviceinc.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>;

Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John

Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan

<kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Alexander

Macnab <alexander.macnab@volta-us.com>; James Pixley <james.pixley@volta-us.com>; Hassan

Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>; Shipping

<shipping@volta-us.com>; Merritt McNeel <merritt.mcneel@volta-us.com>; Dina Arriaga

<dina.arriaga@volta-us.com>; Dori Leyba <dori.leyba@volta-us.com>

Subject: [EXTERNAL] RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

This Message originated outside your organization.

Afternoon, Everyone.

Just talked with TX DOT. There is one stretch of road that permission has to be gained to access it and it runs through Harris and Montgomery Counties. Permission has been requested from these two counties today @ 1700 TX time.

The absolute best case scenario would have those permissions granted and a route survey completed by tomorrow afternoon. Pessimistically and taking into consideration all that has happened in those two counties over the last week, we will not have the Texas proposed route to survey and approve until Wednesday.

Bucket trucks and police have been put on hold as of right now for tomorrow and we will reevaluate our situation tomorrow morning/noon.

This move WILL happen. We just have to deal with all of the fallout from that storm.

Thank you all for your patience. Have a great evening!

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image009.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Monday, February 22, 2021 1:04 PM

To: Waheed Rahman <waheed.rahman@volta-us.com>; Wright, Brandon <BWright@tokaicarboncb.com>; Tran, Duc <DTTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>

Cc: George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Alexander Macnab <alexander.macnab@volta-us.com>; James Pixley <james.pixley@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>; Shipping <shipping@volta-us.com>; Merritt McNeel <merritt.mcneel@volta-us.com>; Dina Arriaga <dina.arriaga@volta-us.com>; Dori Leyba <dori.leyba@volta-us.com>

Subject: Re: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Afternoon, Folks.

Just got off the phone with TXDOT and they are sending the new route to me. Thank will immediately forward that to RockinJT for survey and approval.

I will update as to departure time for tomorrow.

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image007.jpg>

On Feb 22, 2021, at 7:05 AM, Jason Rhorer <jrhorer@craneserviceinc.com> wrote:

Good morning, Everyone!

Transport team is on site at Volta this morning and will be setting up the trailer configuration to accept the PDC Building. They stated that there are members of the Volta Team there this morning and I aske my men to contact them.

I was calling and emailing TX DOT this morning at 0700 for progress on the permits. I have not heard anything back, as of yet. I requested Rick with RockinJT Pilots to hold off on the bucket trucks and police escort for today. As of right now, we will look to move out with the load first thing tomorrow morning. I will continue to work getting our permit from TX DOT.

I know this has been a frustrating shipment however, we are getting much closer. Thank you all for your patience and professionalism.

I will be in contact with the appropriate folks throughout the day.

From: Waheed Rahman <waheed.rahman@volta-us.com>

Sent: Thursday, February 18, 2021 2:51 PM

To: Jason Rhorer <jrhorer@craneserviceinc.com>; Wright, Brandon <BWright@tokaicarboncb.com>; Tran, Duc <DTran@tokaicarboncb.com>; Robyn Jones <rjones@craneserviceinc.com>

Cc: Homer Aikin <haikin@craneserviceinc.com>; Oliver Snogles <osnogles@mlcranegroup.com>; George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Robyn Jones <rjones@craneserviceinc.com>; Alexander Macnab <alexander.macnab@volta-us.com>; James Pixley <james.pixley@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>; Shipping <shipping@volta-us.com>; Merritt McNeel <merritt.mcneel@volta-us.com>; Dina Arriaga <dina.arriaga@volta-us.com>; Dori Leyba <dori.leyba@volta-us.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Jason,

We understand the urgency and please let us know if we can be of any help.

Regards,

<image001.png>

Waheed Ur-Rahman

Lead Engineer – Electrical

P: 832-369-2420 | D: 832-369-2460

E: waheed.rahman@volta-us.com

From: Jason Rhorer [<mailto:jrhorer@craneserviceinc.com>]
Sent: Thursday, February 18, 2021 2:47 PM
To: Waheed Rahman; Wright, Brandon; Tran, Duc; Robyn Jones
Cc: Homer Aikin; Oliver Snogles; George Walter; Scott Brown; Eric Vest; John (Jack) Grinnan; John Field; Ken Miller; Kyle Grinnan; Laurel Brownlee; Robyn Jones; Alexander Macnab; James Pixley; Hassan Quazi; Chris Vasquez; Shipping; Merritt McNeel; Dina Arriaga; Dori Leyba
Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

[EXTERNAL]
Hello, Waheed.

I understand and I hate hearing that you and your team are down.

I just received a message from the bucket truck service, who will have 8 men on this project that they are requesting the beginning be pushed to Monday.

Looking at this situation pragmatically, and a bit pessimistically, I do not see anything happening until Monday. TX DOT will most likely be closed again tomorrow and roads will not be in a safe condition until then, especially the smaller secondary roads that we will be required to transport down.

I will update everyone again tomorrow morning as to any progress.

Jason Rhorer

Logistics and Project Manager
T: [505-877-1100](tel:505-877-1100)
M: [303-726-5985](tel:303-726-5985)
jrhorer@craneserviceinc.com

<image002.jpg>

From: Waheed Rahman <waheed.rahman@volta-us.com>
Sent: Thursday, February 18, 2021 1:12 PM
To: Jason Rhorer <jrhorer@craneserviceinc.com>; Wright, Brandon <BWright@tokaicarboncb.com>; Tran, Duc <DTran@tokaicarboncb.com>
Cc: Homer Aikin <haikin@craneserviceinc.com>; Oliver Snogles <osnogles@mlcranegroup.com>; George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Robyn Jones <rjones@craneserviceinc.com>; Alexander Macnab <alexander.macnab@volta-us.com>; James Pixley <james.pixley@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>; Shipping <shipping@volta-us.com>; Merritt McNeel <merritt.mcneel@volta-us.com>; Dina Arriaga <dina.arriaga@volta-us.com>; Dori Leyba <dori.leyba@volta-us.com>
Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

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sender and know the content is safe.

And also please be advised that we are closed today, due to the winter storm.

<image003.png>

Waheed Ur-Rahman

Lead Engineer – Electrical

P: 832-369-2420 | D: 832-369-2460

E: waheed.rahman@volta-us.com

1616 Gears Rd, Houston, TX 77067

www.volta-us.com

From: Waheed Rahman

Sent: Thursday, February 18, 2021 2:09 PM

To: 'Jason Rhorer'; Wright, Brandon; Tran, Duc

Cc: Homer Aikin; Oliver Snogles; George Walter; Scott Brown; Eric Vest; John (Jack) Grinnan; John Field; Ken Miller; Kyle Grinnan; Laurel Brownlee; Robyn Jones; Alexander Macnab; James Pixley; Hassan Quazi; Chris Vasquez; Shipping; Merritt McNeel; Dina Arriaga (dina.arriaga@volta-us.com); Dori Leyba

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398, project#10540

Jason, Brandon,

Please let us know when you are expecting to receive the permit to drive out from Volta, we can plan the building load out accordingly.

Since many of our folks are impacted due to winter storm, we are not sure if our shipping and receiving is available to load tomorrow, if you already got the permits and planning to leave Volta in this week then I can check with our shop for any possibilities for special arrangements for this load out, please let us know how you like to proceed.

Regards,

<image004.png>

Waheed Ur-Rahman

Lead Engineer – Electrical

P: 832-369-2420 | D: 832-369-2460

E: waheed.rahman@volta-us.com

1616 Gears Rd, Houston, TX 77067

www.volta-us.com

From: Jason Rhorer [<mailto:jrhorer@craneserviceinc.com>]

Sent: Thursday, February 18, 2021 1:58 PM

To: Wright, Brandon; Tran, Duc; Waheed Rahman; Hassan Quazi; Chris Vasquez

Cc: Homer Aikin; Oliver Snogles; George Walter; Scott Brown; Eric Vest; John (Jack) Grinnan; John Field; Ken Miller; Kyle Grinnan; Laurel Brownlee; Robyn Jones

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398

[EXTERNAL]

Hello, Folks.

Are we still going to be able to load on Friday morning? I have my men rooms secured close to Volta.

I would like to load up tomorrow and then leave out on Saturday, weather and TX DOT permitting.

Jason Rhorer

Logistics and Project Manager
T: [505-877-1100](tel:505-877-1100)
M: [303-726-5985](tel:303-726-5985)
jrhorer@craneserviceinc.com

<image002.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>
Sent: Thursday, February 18, 2021 12:55 PM
To: Wright, Brandon <BWright@tokaicarboncb.com>; Tran, Duc <DTran@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>
Cc: Homer Aikin <haikin@craneserviceinc.com>; Oliver Snogles <osnogles@mlcranegroup.com>; George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Robyn Jones <rjones@craneserviceinc.com>
Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398

I also forgot to mention the unavailability of fuel for the equipment.

Jason Rhorer

Logistics and Project Manager
T: [505-877-1100](tel:505-877-1100)
M: [303-726-5985](tel:303-726-5985)
jrhorer@craneserviceinc.com

<image005.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>
Sent: Thursday, February 18, 2021 12:46 PM
To: Wright, Brandon <BWright@tokaicarboncb.com>; Tran, Duc <DTran@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>
Cc: Homer Aikin <haikin@craneserviceinc.com>; Oliver Snogles <osnogles@mlcranegroup.com>; George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>; Robyn Jones <rjones@craneserviceinc.com>
Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398

Afternoon, Folks.

As of right now there are a few factors to consider before moving North with this shipment that I want you all to consider.

Road conditions north of Houston are very poor right now. Hwy 45 is still snow packed and iced over. We cannot move this load safely with this being the case.

Accommodations for the Transport Team are going to be an issue as well. Right now, pilots and Transportation crews are two to three hours outside of Houston for lodging. I do not see that changing too significantly moving north on 45 tomorrow.

TX DOT is still not issuing any permits for anything other than Disaster Relief at this

time. There have been two emails and two phone calls into them today from me and I do not have an answer as to when we will have this permit issued. Loading and beginning transport on Saturday would give us until Friday afternoon to obtain the permit required.

I believe that it is in the best interests of safety, not only the commodity but the men and equipment to postpone movement north until Saturday. That will allow the storms taking place now north of Houston to move out and road conditions to improve tomorrow. It also will give us a day to hopefully have the Texas Utilities companies to enact more repair on the power grid.

Please respond to this email with your opinions and concerns. Thank you very much!

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)

jrhorer@craneserviceinc.com

<image006.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Thursday, February 18, 2021 8:52 AM

To: Wright, Brandon <BWright@tokaicarboncb.com>; Tran, Duc <DTran@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>

Cc: Homer Aikin <haikin@craneserviceinc.com>; Oliver Snogles <osnogles@mlcranegroup.com>; George Walter <gwalter@craneserviceinc.com>; Scott Brown <sbrown@craneserviceinc.com>; Eric Vest <evest@craneserviceinc.com>; Jason Rhorer <jrhorer@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmler@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>

Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398

Taking into consideration the storms that are taking place North of Houston right now, the earliest I can see delivery is on the 23rd with morning of the 24th being a distinct possibility. Again, this is all best case scenario. Pessimistically, we may not be able to deliver until the 25th. Figure roughly 4-5 hours for transload and then walk into place. I am not aware of the distance or maneuvering required to get the building to its new home so I cannot provide you with a time frame for that portion. Figure, wrapped up and mobilizing off site within 24 hours from delivery.

TX DOT is closed and has been since yesterday. The only permits getting issued, as of this morning, are for Disaster Relief with the State of Emergency there. Our shipment is in the "front of the line" to be issued. I am staying on top of this final permitting to make sure we have the permit in hand at the earliest possible opportunity.

We will do everything we can on our side to take advantage of every opportunity to expedite this shipment. I will continue to provide updates to the situation as they come about. Please let me know what changes you all may see on your end so we can be as agile as possible completing this project.

Jason Rhorer

Logistics and Project Manager

T: [505-877-1100](tel:505-877-1100)

M: [303-726-5985](tel:303-726-5985)
jrhorer@craneserviceinc.com

<image007.jpg>

From: Wright, Brandon <BWright@tokaicarboncb.com>
Sent: Thursday, February 18, 2021 8:31 AM
To: Jason Rhorer <jrhorer@craneserviceinc.com>; Tran, Duc <DTran@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>
Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Jason,

If the building is picked up tomorrow. When do you expect you will be on site ready to site in place?

Brandon

From: Jason Rhorer <jrhorer@craneserviceinc.com>
Sent: Thursday, February 18, 2021 8:53 AM
To: Tran, Duc <DTran@tokaicarboncb.com>; Waheed Rahman <waheed.rahman@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>
Cc: Wright, Brandon <BWright@tokaicarboncb.com>
Subject: [EXTERNAL] RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398

This Message originated outside your organization.

Good morning, Folks!

Just checking in for status update. My Team is on schedule for loading tomorrow morning at Volta. We dropped the tractor/trailer and the service truck off there to minimize exposure to the equipment. Please let us know if there needs to be something moved or changed.

I have my team set to be on site at 0700 tomorrow morning. Please let me know as soon as you can if this is feasible. I have to update the police, utilities and support companies as to our schedule.

Thank you all very much and I hope you are ball safe and warm!

Jason Rhorer
Logistics and Project Manager
T: [505-877-1100](tel:505-877-1100)
M: [303-726-5985](tel:303-726-5985)
jrhorer@craneserviceinc.com

<image008.jpg>

From: Tran, Duc <DTran@tokaicarboncb.com>
Sent: Wednesday, February 17, 2021 9:26 AM
To: Waheed Rahman <waheed.rahman@volta-us.com>; Hassan Quazi <hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>

Cc: Wright, Brandon <BWright@tokaicarboncb.com>; Jason Rhorer
<jrhorer@craneserviceinc.com>
Subject: RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Waheed and Vota team,

I just corrected Jason email address. Please reply to this email.

Duc Tran
Manager, Concent Decree Projects
301 Commerce St. Ste. 500
Fort Worth, TX 76102
(O): 817-380-3496
(C): 630-486-7124

<image009.png>

From: Tran, Duc
Sent: Wednesday, February 17, 2021 10:23 AM
To: Waheed Rahman <waheed.rahman@volta-us.com>; Hassan Quazi
<hassan.quazi@volta-us.com>; Chris Vasquez <chris.vasquez@volta-us.com>
Cc: Wright, Brandon <BWright@tokaicarboncb.com>; hjrhorer@craneserviceinc.com
Subject: FW: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398

Waheed,

Let us know the status of your operation for building pickup.

Regards,

Duc Tran
Manager, Concent Decree Projects
301 Commerce St. Ste. 500
Fort Worth, TX 76102
(O): 817-380-3496
(C): 630-486-7124

<image009.png>

From: Wright, Brandon <BWright@tokaicarboncb.com>
Sent: Wednesday, February 17, 2021 10:11 AM
To: Tran, Duc <DTran@tokaicarboncb.com>
Cc: Archino, Joseph A. <JArchino@tokaicarboncb.com>; Perry Rowell
<perryrowell@connerindustriestx.com>; Nester Dayag
<Nester@connerindustriestx.com>
Subject: Fwd: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398

Duc,

Can you forward this to Volta team. We will be able to load building when they are able.

Nester and Perry,

We will need to make sure all is clear on site next week to offload PDC building. As soon as I get internet back I will follow up with everyone.

Thanks

Brandon

Sent from my Verizon, Samsung Galaxy smartphone
Get [Outlook for Android](#)

From: Jason Rhorer <jrhorer@craneserviceinc.com>
Sent: Wednesday, February 17, 2021 9:48:50 AM
To: Homer Aikin <haikin@craneserviceinc.com>; Rockin JT PCS LLC <rockinjtpcs@yahoo.com>; Oliver Snogles <osnogles@mlcranegroup.com>; Eric Vest <evest@craneserviceinc.com>; John (Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field <jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan <kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>
Cc: Wright, Brandon <BWright@tokaicarboncb.com>; Caroline Asimakopoulos <casimakopoulos@mlcranegroup.com>
Subject: [EXTERNAL] RE: CSI Amarillo/AMD - Tokai PDC Building Move - AMAM-1107398

This Message originated outside your organization.

Good morning, Folks.

Hope everyone is warm and safe.

We had two members of the transport team make it to Houston yesterday late in the afternoon. Hotel accommodation were only available in Grover, TX so those two men had to drive 2.5 hours (road conditions) to board for the night. The driver of the tractor and the pilot made it to Decatur, TX and had to shut down for the evening. There were no rooms to be had within a 150 mile radius so they spent the night in their vehicles. Thank you, Gentlemen. I know that is not ideal.

Entire Transport Team will be in Houston this evening and ready to load as soon as Volta is in a condition to do so. Hotel rooms are secured for all the men in Houston for tonight and Thursday night. As of now we are looking to load on Friday, hopefully.

Pilots, bucket trucks and police escort provided by Jamie and RockinJT will be on site at 0900 Friday morning. If that needs to be pushed back, we would like to provide them with as much forewarning as possible. I know that is a short window as power issues persist in Texas. Cold and snow is forecasted in Texas until Friday at the earliest.

I am keeping a record of events as they progress, so we can all review them.

Thank you, Everyone. I know this has not been an "ideal" project however, we will keep moving forward and make this happen like the professionals we are. Thanks again and I will be talking to all of you throughout the days to come.

Jason Rhorer

Logistics and Project Manager
T: [505-877-1100](tel:505-877-1100)
M: [303-726-5985](tel:303-726-5985)
jrhorer@craneserviceinc.com

<image010.jpg>

From: Jason Rhorer <jrhorer@craneserviceinc.com>

Sent: Tuesday, February 16, 2021 7:54 AM

To: Homer Aikin <haikin@craneserviceinc.com>; Rockin JT PCS LLC

<rockinjtpcs@yahoo.com>; Oliver Snogles <osnogles@mlcranegroup.com>; Eric Vest

<evest@craneserviceinc.com>; Jason Rhorer <jrhorer@craneserviceinc.com>; John

(Jack) Grinnan <jgrinnan@craneserviceinc.com>; John Field

<jfield@craneserviceinc.com>; Ken Miller <kpmiller@live.com>; Kyle Grinnan

<kgrinnan@craneserviceinc.com>; Laurel Brownlee <lbrownlee@mlcranegroup.com>;

Michael Jones <mjones@craneserviceinc.com>

Cc: Wright, Brandon <BWright@tokaicarboncb.com>

Subject: CSI Amarillo/AMD - Tokai PDC Building Move

Good morning, Folks.

Just wanted to update everyone on the situation developing in Texas. As many of you are aware, with the freezing temps and snow in Texas there has been power outages throughout the state. I just got off of the phone with Brandon and he informed me that the power at Volta (manufacturer) has been out for two days and he has yet to hear any news, as of this morning. There is a document that is required by the TX DOT that I sent out on Friday the 12th that needed to be completed by Volta. With the issues that Volta is experiencing, that document has yet to be returned. Brandon is aware that without this document, the permit for the laden portion of this haul cannot be completed. Brandon is doing all he can to get this document completed.

As of right now, we are expecting a one day delay in completion of the move. We will do all we can to make up this lost time. The possibility of even further delays is possible so, please everyone, be patient, stay professional and we will get this project completed.

AMD Team, please keep in contact with me and we will work to utilize our time effectively as possible. Please complete your JSAs at the beginning of each shift and be safe, Gentlemen.

Have a fantastic day, Everyone.

Jason Rhorer

Logistics and Project Manager
T: [505-877-1100](tel:505-877-1100)
M: [303-726-5985](tel:303-726-5985)
jrhorer@craneserviceinc.com

<image008.jpg>

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ClearView™

Incl. Remote DCS Commissioning Assistance

Tokai Carbon

Borger, Texas, USA

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1 Introduction

In this document, Topsoe addresses the operational needs for the Tokai Air Quality Control system (AQC) unit and describes the Connected Services solution, ClearView™, that will drive operating margin and reliability optimization, improve energy management, and increase overall profitability.

This Connected Services solution delivers performance-enhancing insights straight to Tokai's process engineers and managers. The insights are generated by continuous upload of plant operating data to the Topsoe Cloud, where advanced software, containing Topsoe's unique tools and know-how, analyzes the data. Immediately hereafter, relevant information is made available in online dashboards. As an integrated part of the service, Topsoe experts follow plant performance, and proactively guide and support Tokai's plant engineers in optimizing performance and quickly addressing operational issues. In Appendix 13 the Remote DCS Commissioning Assistance is addressed.

1.1 Delivering value

ClearView™ has been specifically designed to help in closing the performance gap between best day and normal operation. Furthermore, the ClearView™ models and ClearView™ service manager will work around bottlenecks and help improve best day performance.

Safe design margins on plant and equipment designs mean that plants tend to handle, and cover up, undesirable conditions on a continuous basis. In most cases operators are not aware of these conditions until they have compounded to the point of a major upset. The only existing tool to manage this – the DCS system - is not a pro-active process health monitoring tool. The DCS is not able to look past these design margins, and therefore, requires something to have gone wrong before it is able to give an alert.

ClearView™ aims to address this shortfall by being able to assess the plant for variable conditions and detect deviations before any DCS alarm has been activated.

In addition to this, ClearView™ performs hydraulic and catalytic projections to evaluate remaining run-lengths under different operating conditions. This enables up-to-date and reliable turnaround planning with no surprises in the form of capacity limitations.

Furthermore, start-up and shutdown are critical periods for all units that handle sulfuric acid; ClearView™ monitors each of these to ensure procedures and control systems are giving the correct outcome during sensitive transient periods.

Finally, a wide range of important, but less quantifiable, benefits can be obtained from ClearView™. A summary of these benefits can be found in the table below.

Value	How?
Plant reliability	Fault models perform continuous monitoring of critical process parameters based on Topsoe's vast industry and theoretical expertise. These fault models support early event detection, effective troubleshooting assistance, and corrective actions, which will help avoiding shut-downs or at least minimizing the number of unplanned shut-downs.
Data quality – the true picture	Through data cleansing, steady state detection, and reconciliation models, ClearView™ provides an accurate picture of actual (true) plant operating conditions, which is more precise than observed from the DCS system. In addition, instrument accuracy is checked, and possible need for repair, tuning or calibration is identified.
Optimal catalyst management	ClearView™ evaluates and predicts catalyst performance and lifetime. Economic evaluations are made to find the ideal time to replace catalysts, and thus maximize utilization and minimize overall catalyst consumption.
Knowledge center	ClearView™ dashboards and fault models are designed to improve the fundamental understanding of plant operation for operators and engineers. In addition, ongoing interaction with your ClearView Service Manager and Topsoe experts will further strengthen competence development of plant personnel.
Revamp platform	ClearView™ identifies bottlenecks, equipment margins, and establishes base case flowsheets. This secures faster and cheaper revamp studies in the future.

Table 1: Benefits of ClearView™

1.2 ClearView™ is the unique offering

Working with Topsoe under a ClearView™ contract includes a range of important differentiators, which will shape the future collaboration between our companies.

Dedicated service commitment: Topsoe employs close to 1,000 engineers and scientists and Topsoe Service Engineers have assisted more than 1,000 process units worldwide during the last decades. This depth of knowledge is why Topsoe is known worldwide as a leader in services; and Topsoe's ongoing support and guidance in the ClearView™ concept, is based on the extensive expertise gained over the years.

Unique software capabilities: Supporting digitalization of Topsoe plants, Topsoe's Connected Services solution, ClearView™, is developed leveraging Honeywell expertise in plant connectivity, cyber security, and asset management software. The user interface (online dashboards) is built using advanced Honeywell visualization software to deliver the ClearView™ solution to you in a concise and meaningful way.

As foundation for the software, ClearView™ utilizes Topsoe's proprietary models built on fundamental knowledge of both our licensed technology processes and the catalysts used in the plants. Our models are validated by billions of data points from pilot units and commercial data and can simulate performance accurately. On top of the simulation models, ClearView™ has embedded distilled insights of Topsoe operational best practices, to deliver information and alerts in the situations, where it is relevant.

2 Scope of ClearView™ Connected Services

ClearView™ is a comprehensive technical service concept based on remote support – but not control – of the plant from Topsoe offices and is provided as a subscription service.

ClearView™ will be built for the specific process layout and equipment, converter and catalyst specifications of Tokai's AQC unit and will include the below:

2.1 IT architecture & software

Configuration & implementation: Establish connectivity to the cloud, software configuration/set-up, and software implementation.

IIoT infrastructure: Cloud (IIoT platform), connectivity, cyber security and data storage delivered by Honeywell.

ClearView™ software package including:

- Data cleansing tools and steady state detection
- Reconciliation (error-smoothing) of operating data
- Simulation of equipment and catalyst performance
- Hydraulic projections based on dust build-up modelling
- SO₂ emissions projections for catalyst management
- Fault modes, based on calculated properties, with alerts on conditions negatively impacting plant KPI's, including guidance on how to rectify the situation

ClearView™ enrollment: ClearView™ delivered through a web-based dashboard interface powered by Honeywell.

2.2 Service and support

Remote assistance: A dedicated ClearView Service Manager from Topsoe technical services team will provide on-going and proactive interaction with plant engineers on process optimization and troubleshooting. In addition, quarterly performance review reports will be made. The ClearView Service Manager will use a network of Topsoe experts to strengthen the support to Tokai further.

On-line meetings: Kick-off meeting, software deployment meeting and yearly performance review meetings on site or alternatively via online video conferencing.

System maintenance: Topsoe and/or Honeywell will perform necessary maintenance of all off-site server hardware and software associated with ClearView™ including updates and migrations.

Please see Appendix for a detailed description of the ClearView™ scope.

Topsoe will continue to make modifications and add additional features to the ClearView™ software package, which will be included as software updates on an ongoing basis at no extra cost.

The roles of Topsoe engineers are solely those of technical advisors. Topsoe engineers do not take over control of Tokai's unit.

3 Commercial terms

ClearView™ is a subscription service, where Tokai signs up for an initial two-year subscription. After the initial two-year period, subscription is automatically extended on a yearly basis, unless terminated.

3.1 ClearView™ pricing

This proposal covers the supply of ClearView™ for the AQC unit with a fee of:

EUR xxx,000 per year
(EURO xxx thousand per year)

plus a one-time implementation fee of ClearView™ for the AQC unit of:

EUR xxx,000
(EURO xxx thousand)

The fees include all expenses in connection with the software implementation and the specified services and support during the subscription period.

Topsoe reserves the right to adjust the annual fee after the end of the initial two-year subscription and thereafter every other year.

The pricing for Remote DCS Commissioning Assistance will be according the existing signed supply agreement between Tokai and Haldor Topsoe for Tokais Borger carbon black plant.

4 Payment terms

All payments to Topsoe shall be made by bank transfer against invoices issued by Topsoe to Tokai. The payment terms are net cash against invoice within 30 days.

Payments should be made as listed below:

- Implementation fee plus first year's fee are due 6 months prior to the expected start-up of the AQC unit.
- Payments for subsequent years are due 30 days after each anniversary day of actual start-up

5 Delivery time and terms

During the pre-commissioning phase, the ClearView™ software and plant connectivity will be configured and set up. The ClearView™ software and remote assistance support will be available from first production day. The Remote DCS Commissioning Assistance, addressed in Appendix 13, will be available during the commissioning phase.

6 Use of Topsoe catalyst

ClearView™ is designed to ensure optimal utilization of Topsoe catalysts, while at the same time taking overall process conditions and limitations into consideration. ClearView™ is based on the catalysts in the AQC unit being Topsoe catalysts, and the use of ClearView™ is subject to future replacement catalyst charges being Topsoe catalysts; otherwise the ClearView™ agreement may be terminated with 6 months' notice.

7 Taxes

All amounts specified in the agreement shall be understood as net amounts to be received by Topsoe after deduction of all taxes and/or duties (including without limitation income taxes and turnover taxes) required to be withheld or paid in any country outside Denmark, except duties payable by Topsoe in accordance with Incoterm 2020. Topsoe shall pay all Danish taxes and duties.

8 Limitation of liability

The maximum liability shall be limited to 50% of the yearly ClearView™ fee for the year a claim is made.

Tokai, Borger Texas

9 / 28

ClearView™ incl. Remote DCS Commissioning Assistance

S-08447 KICH/DOHO, November 5, 2020

Rev. 0

In no event shall Topsoe be liable for any indirect or consequential damage resulting from any fault of Topsoe, including, but not limited to any delay or loss of time in bringing the unit into operation or loss of production or profit.

9 Validity

All the provisions of this proposal as written above are firm and valid for acceptance until November 30, 2020. This proposal shall form the basis of a ClearView™ contract, which also includes additional terms and conditions, to be mutually agreed upon prior to contract signing.

We trust that this proposal for ClearView™ is of interest to you and meets your expectations. Should you have any questions or comments, please do not hesitate to contact us.

Yours sincerely,

HALDOR TOPSOE A/S

Kim Christensen
Business Director

Dorthe Holland
Project Director

Appendix: Clearview™ Connected Services

1 ClearView™ concept

Topsoe Connected Services, ClearView™, is a solution that facilitates very close collaboration with Topsoe after commissioning of the plant. ClearView™ ensures joint continued focus on avoiding unplanned shutdowns and optimizing overall plant KPIs like emissions, corrosion prevention, hydraulic capacity, and thermal capacity.

ClearView™ is based on automatic upload of plant operating data to a cloud-based analytics software combined with close dialogue between plant engineers and Topsoe experts. The solution is using Topsoe's proprietary simulation models, expert knowledge, and vast experience within catalysis and process design to ensure continuous optimal plant operation. The online dashboards visualize the ClearView™ results, giving plant personnel an easy overview of how to optimize plant operation. In addition, ClearView™ contains operating insights, which enable early event detection and avoidance of unplanned downtime.

Topsoe experts will monitor the online dashboards to ensure a close proactive dialogue with plant personnel, responding to reliability-related alerts and pursue optimization opportunities.

ClearView™ is built on a proven IIoT platform together with our strategic partner Honeywell - a global leader in this area, ensuring maximum data security and IIoT system reliability for your plant.

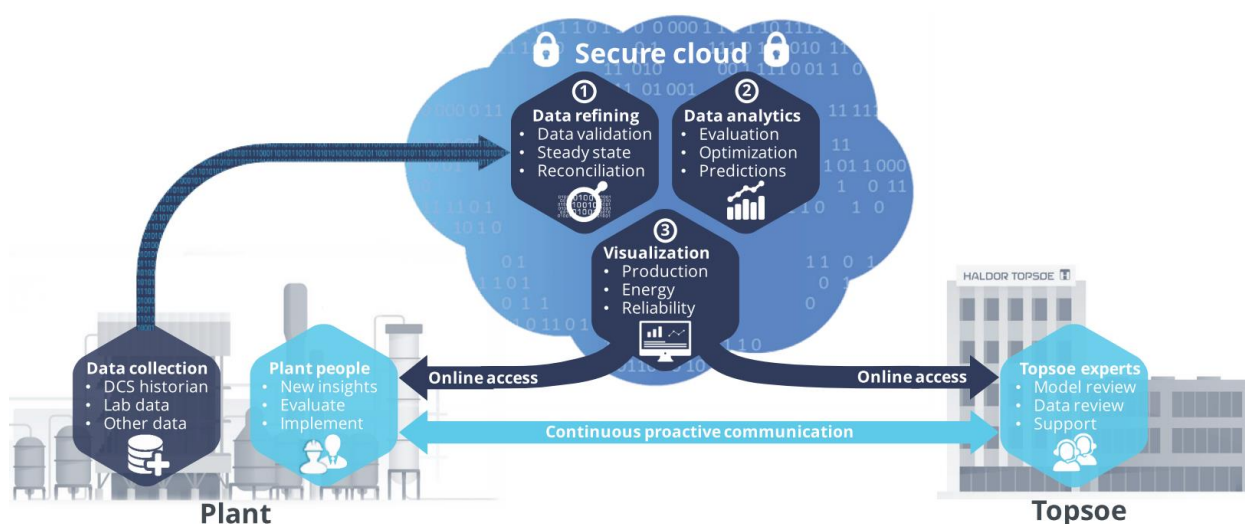


Figure 1: See the above illustration come alive in this video;

<https://www.topsoe.com/services/connected-services/clearview-WSA>

2 ClearView™ value creation

ClearView™ provides a platform where customers and Topsoe can work together in a unique collaboration environment, based on the most advanced modelling and simulation tools available.



Figure 2: ClearView™ creating value in key areas

Data quality: The actual operating data from plants, shown in the DCS system as well as the analyses from the lab are never 100% accurate. Every measurement introduces some inconsistencies, and this inconsistency can grow in case of instrument failure or faulty lab equipment. ClearView™ will through its data cleansing, steady state, and reconciliation models help create trusted data, which will provide a precise picture of the actual 'as is' operation.

Plant reliability: Fault models based on Topsoe's vast industry experience are embedded into ClearView™ and provide early event detection, troubleshooting, and corrective actions. The fault models are based on simulated or calculated properties, and brings an extra layer of reliability detection, which the plant's Emergency Shutdown (ESD) system is not covering.

Plant performance: Topsoe process models in ClearView™ are during steady state operation evaluating set points and identifying and suggesting changes in set points for optimal performance.

Catalyst management: ClearView™ will evaluate catalyst performance and lifetime to find the ideal time to replace catalysts.

Knowledge center: ClearView™ dashboards and fault models will improve the fundamental understanding of plant operation. In addition, ongoing interaction with the ClearView™ Service Manager and other Topsoe experts will further strengthen competence development of plant personnel.

Revamp platform: ClearView™ identifies bottlenecks, equipment margins, and establish base case flowsheets. This secures faster and cheaper revamp studies.

3 ClearView™ software

In Figure 3, the different scopes of the software are illustrated, and they are described further in the following sections. The ClearView™ solution will perform calculations on an on-going basis and the user interface will automatically update, as new information is available. The various calculations run at different frequencies based on availability of input data and calculation type.

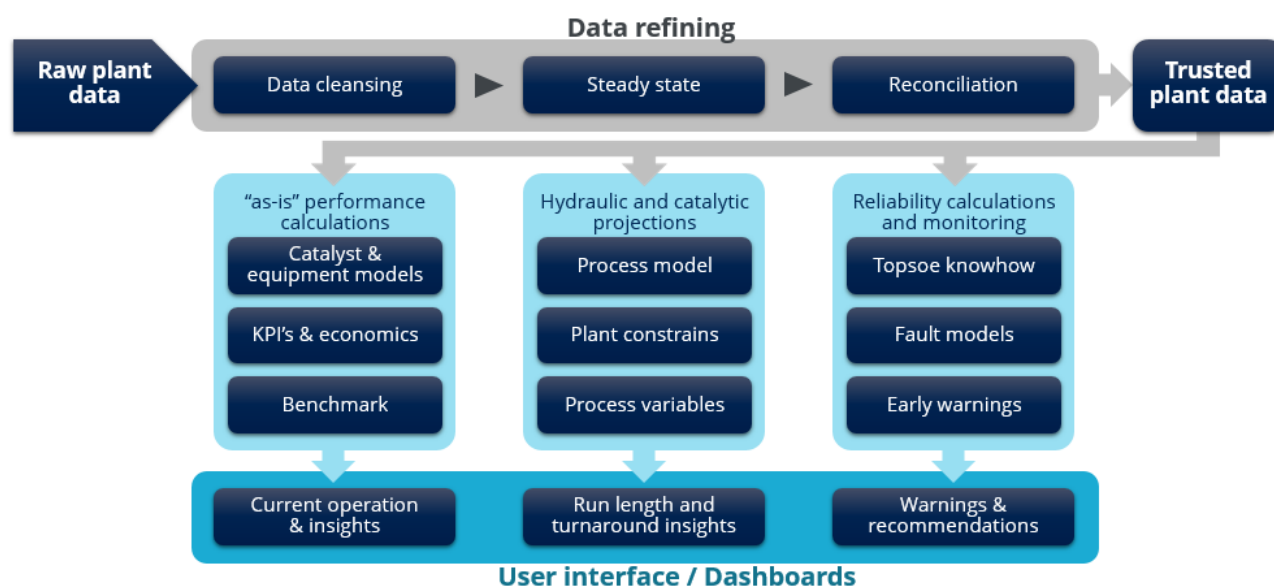


Figure 3: ClearView™ data flow – data refining, analytics and user interface

Data refining: The ClearView™ software extracts plant data and performs data refining to create a trustful basis for further analytics such as simulations, performance evaluations, and optimization calculations. After the data-refining step, the software performs three types of analytics and evaluations:

- **As-is performance calculations:** An overview of current operation is established (as-is), based on the trusted/corrected data from the data refining. As-is performance calculations are related to catalyst/equipment performance, full plant process simulation, overall plant KPIs, economic impact and benchmarking.
- **Hydraulic & catalytic predictions:** Catalyst dust capture and deactivation models are used to project plant performance into the future. Remaining run times are calculated for scenarios where the main process blower becomes a bottleneck, as well as when catalyst conversion drops and starts impacting SO₂ emissions. This is done for various process loads, in case there is flexibility for capacity adjustment to increase run length.
- **Reliability calculations:** Topsoe's fault models constantly monitor many calculated and simulated process parameters, to detect early signs of potentially critical conditions, which can harm catalysts or equipment. If detected, alerts with concrete actions to mitigate these are prompted.

What follows is an explanation of the above-mentioned features of the ClearView™ software.

4 Data refining

On an on-going basis, the ClearView™ software will capture process and analytical data directly and automatically from the process data historian and laboratory information system on site, to ensure that results always reflect current operation.

Data Cleansing: The data-cleansing model processes the raw plant data. Each measurement has a defined trusted window, and if the measurement is not within the window, the measurement will be discarded as an outlier and not included for further analysis.

Steady state: A steady state evaluation is crucial to evaluate the plant performance. The steady state algorithm is based on several key numbers to fulfil the steady state criteria with the given tolerance level for the measurements. When detecting a steady state period, an average of each measurement is sent to the next step, the data reconciliation.

Data reconciliation: All measurements in the plant are exposed to inaccuracies to a smaller or larger degree. The data reconciliation model will convert the raw measurements to a corrected (reconciled) set of operating data, which comply with the plant's mass- and energy balances as well as temperature profiles from the catalytic reactors. It is essential to perform such data reconciliation to obtain a "true" set of operating data, which can then be used for further simulations and calculations.

Data refining is a crucial step before applying further analytics, but the data refining itself also create valuable information for the Maintenance Department and Site Laboratory as illustrated in **Error! Reference source not found.4**.

The data cleansing will provide guidance on instruments to inspect, calibrate, repair or replace. In addition, when certain process parameters are detected to interrupt steady state, but where no plant capacity changes are made, further tuning of control loops should be considered. Finally, the data reconciliation provides input on imprecise/wrong measurements. The source of imprecise/wrong measurements (plant instrumentation or laboratory analysis) can then be investigated. Topsoe instrumentation experts and analysis experts are available to support in these areas.

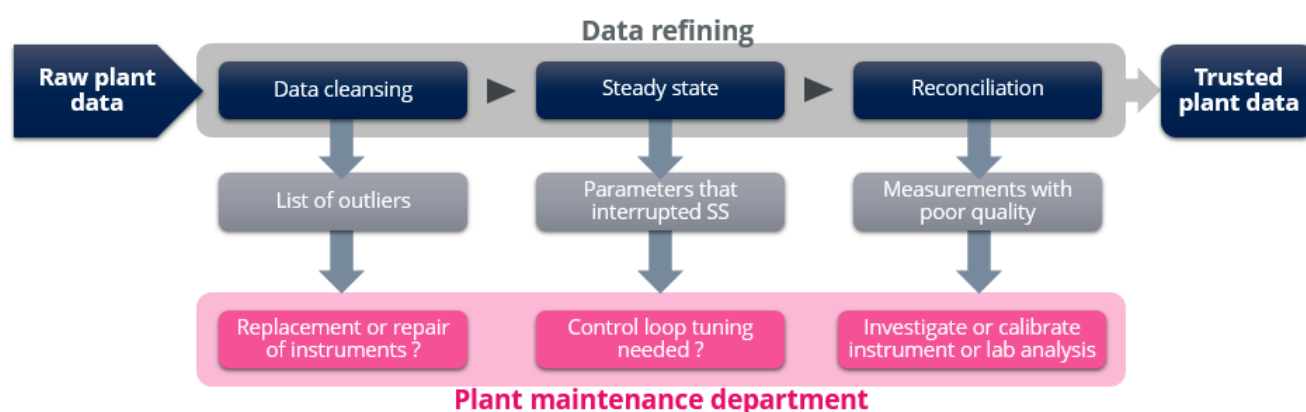


Figure 4: Data refining process creates concrete actions for plant maintenance departments

5 As-is performance calculations and user-interface

The ClearView™ solution is delivered through a selection of online dashboards (user interface). The main dashboard supports the overall plant KPI's. Other dashboards include Section & Equipment dashboards for each section of the plant, Hydraulics, Dew Points, Start-up & Shutdown, as well as Data Consistency (including Mass Balance, Data Reconciliation, and Steady State).

Various calculations are generating the data for the dashboards, i.e., full flowsheet calculations, catalyst simulations and predictions, heat exchanger performance, simulations benchmarking figures, etc.

6 Reliability calculations and user-interface

The ClearView™ software has embedded Topsoe operational best practices obtained over the last decades, to deliver information and alerts in situations, where it is relevant.

This best practice know-how forms the basis for so-called fault models, which monitor the process conditions, and provide early event detection of potential problems. The fault models are based on reconciled, simulated and calculated properties and, therefore, add an extra layer on top of the plant's ESD system, with alerts that are not prompted in the DCS system.

Figure 5 shows an example of a troubleshooting panel is given. This screen allows plant personnel to review and analyze the situation, when the fault model has triggered an alert. By clicking on the fault variable that has triggered the alert, the action panel will be displayed. The action panel, as seen in Figure 6, shows the *problem*, the *consequence* if no corrective action is made; and the *recommendations* and corrective actions to be made.

HALDOR TOPSOE 

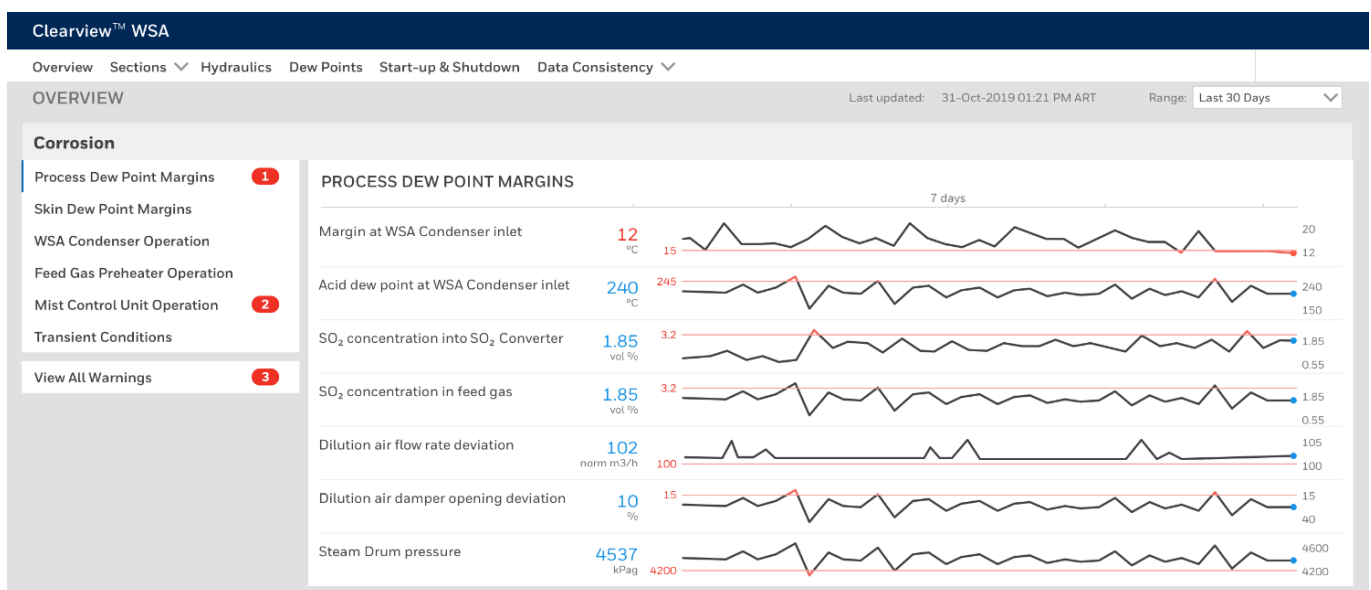


Figure 5: Example of a troubleshooting panel

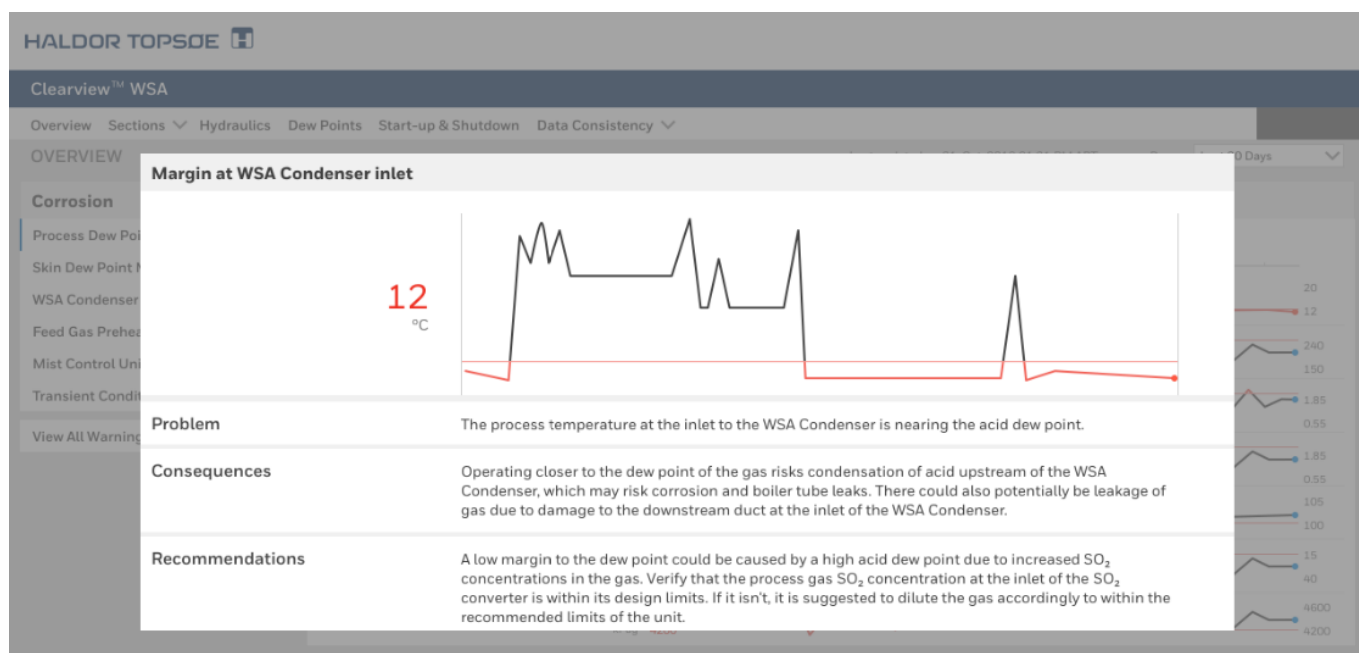


Figure 6: Example of a corrective action panel

7 Hydraulic & catalytic projections

Having consistent, predictable unit operation is critical, even when there is fluctuation in load (both volume and sulfur concentration). Ensuring that the unit can make it through to the next planned turn-around means that one must ensure that there is sufficient hydraulic capacity as well the catalytic activity to comply to SO₂ emissions limits.

Dust build up is expected in the top section of the SO₂ Converter. ClearView™ will use the reactor configuration data and employ dust build-up models to predict how much dust will deposit on the catalyst, as well as what effect this dust will have on the catalyst bed's pressure drop. This is then compared to the main process blower's hydraulic capabilities to calculate how time remains before the blower becomes a bottleneck and capacity must be reduced. This calculation is updated continuously to provide adequate warning of when catalyst screening may be required.

The dust build-up is analyzed for the current process load, and a sperate analysis is performed assuming the unit is run at its full design capacity. These projections can be used simultaneously to plan turnarounds in case an increase in load is anticipated in future, resulting in better-informed planning and decision-making.

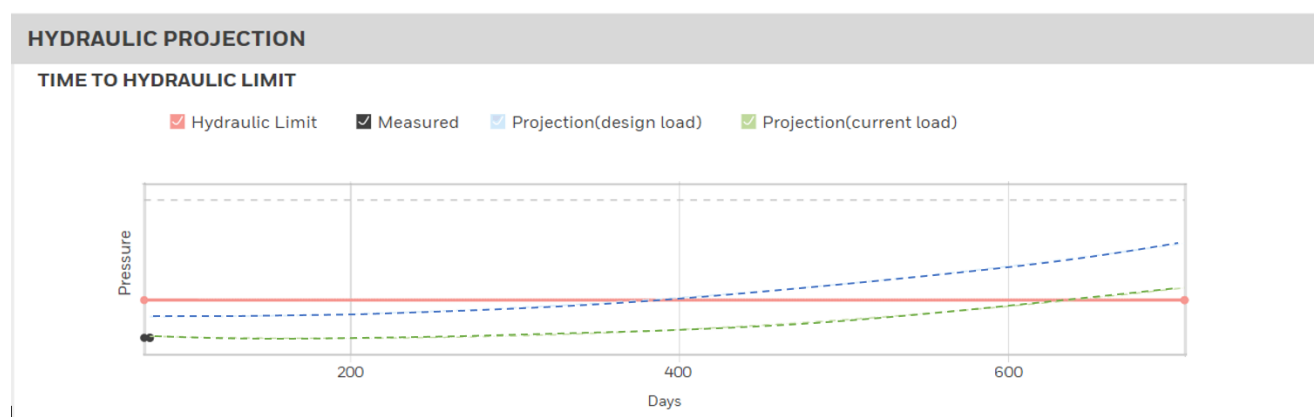


Figure 7: Example of a hydraulic projection

Catalyst deactivation can also be modelled and the decrease in conversion is used to predict how SO₂ emissions from the unit will increase with time. The catalyst deactivation model can then be updated based on activity measurements performed by Topsoe when the catalyst is sampled. This will eliminate the need for conservative, precautionary catalyst replacement. Once again, various process loads are considered to understand how load fluctuations could impact the decision to replace catalyst.

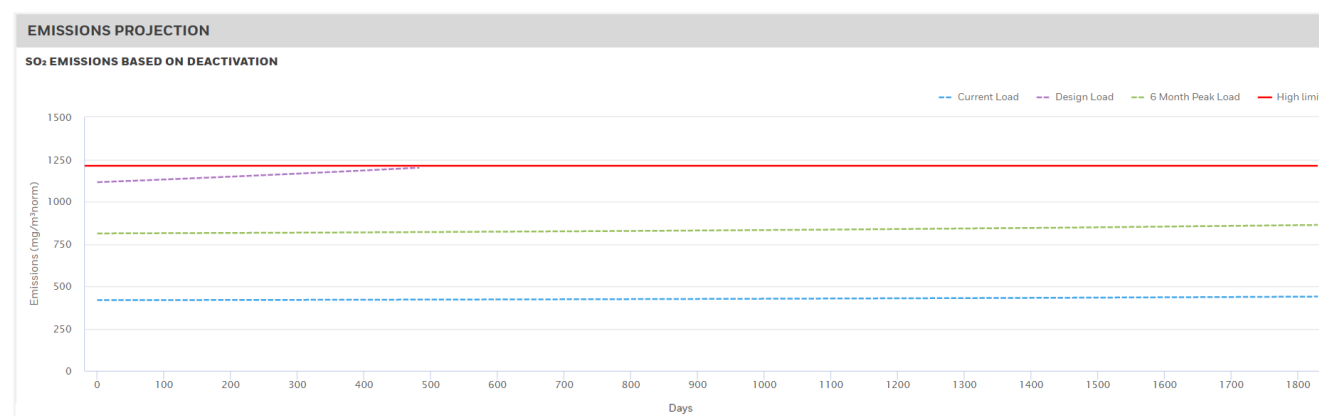


Figure 8: Example of a catalytic projection

8 Revamp platform

For revamp studies, comprehensive plant data is essential to establish a base case flowsheet at maximum load. Further, equipment simulations are required to map the equipment margins and identify plant bottlenecks. Establishing the base case is time-consuming exercise, but with ClearView™ deployed, the base case information is readily available on an ongoing basis.

This creates a basis for two benefits; one is that Topsoe, as part of the ClearView™ service, can identify smaller modifications in the plant, which can help improve plant performance, another is that Topsoe can perform a revamp study on request, where ClearView™ ensures faster delivery time on revamp studies.

9 ClearView™ software maintenance and upgrades

Topsoe will maintain the functionality and relevance of the ClearView™ solution by providing on-going updates to the process models, software features and dashboard layout as such become available. Topsoe and Honeywell also commit to the maintenance of the entire hardware and software infrastructure of the cloud platform including hardware refresh, backups, disaster recovery, software migrations/updates, and other maintenance activities.

10 Honeywell cyber security

Honeywell cyber security is applied to ClearView™, and ongoing development and innovation by Honeywell is released for ClearView™ in parallel with Honeywell's own cloud-based applications offered from the Honeywell Forge™ IoT platform.

The development of ClearView™ solutions adhere to rigorous cyber security processes throughout the engineering lifecycle. Honeywell cyber security processes range from defensive software engineering practices to cyber architecture reviews, to vulnerability and penetration testing. After deployment of an application, the Honeywell methodology is to continue assessing cyber defenses against emerging threats. When vulnerabilities are identified, they are prioritized and immediately patched if critical issues are found that do not have a mitigating defense.

11 ClearView™ - A platform for close collaboration

ClearView™ is not only software, but also a full-service concept, which facilitates close collaboration between Topsoe and our customers. We have outlined how such collaboration is foreseen in different situations.

11.1 Commissioning and test run advantages with ClearView™

For a new plant, commissioning and test run is a busy phase. Topsoe, OEMs and contractors are physically present at plant site during this phase. Even though the Topsoe team on site is skilled and highly qualified, unforeseen challenges may arise that require sparring with a Topsoe expert from one of our offices.

With ClearView™ in place, the ClearView Service Manager and the network of Topsoe experts from our global organization can coordinate and provide full support to the engineers on site.

11.2 Constant focus on reliability

The ClearView Service Manager and plant personnel get alerts if the ClearView™ software detects a potentially critical operating condition. Based on such early warning, they have a chance to discuss proactive countermeasures, as well as doing a joint root cause analysis, before any negative impact is observed.

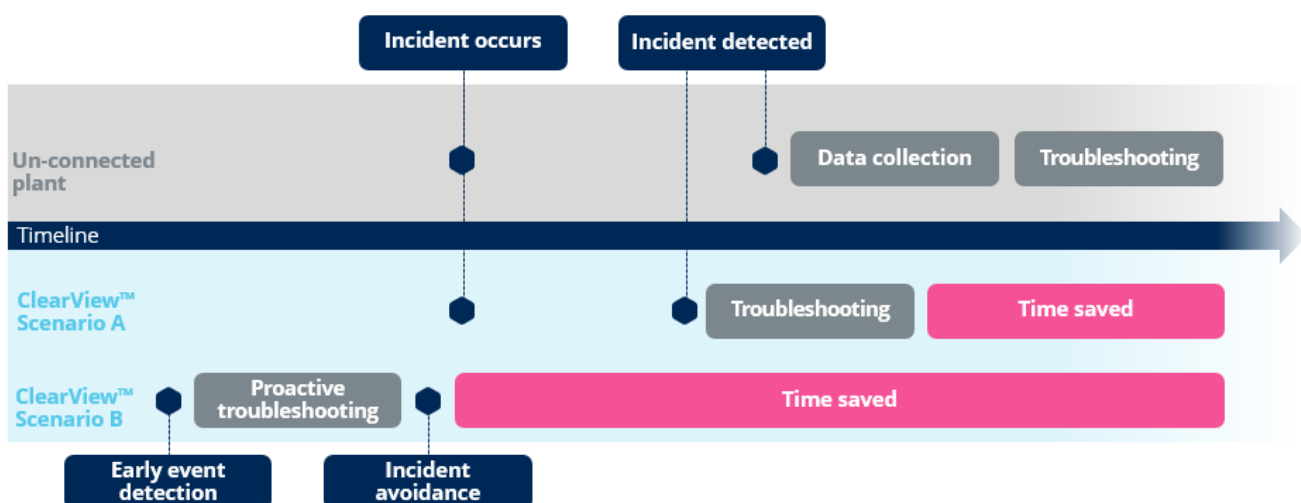


Figure 11: ClearView™ provides early event detection, which can result in avoidance of critical incidents

The software will be able to detect many, but not all, possible plant incidents. If an incident happens, your ClearView Service Manager can quickly access actual operating data, offering fast and effective troubleshooting assistance and support on root-cause-analysis, which will reduce the possible negative impact of the incident.

11.3 On-going optimization of plant operation

When observing a gap between optimal set points and actual set points, the ClearView Service Manager is available for discussing how to implement the suggested operational change in the best and safest way.

It is necessary to continue to keep the simulation model up-to-date and tuned, which Topsoe will do based on an on-going dialogue with plant personnel about possible changes in plant layout/constraints.

11.4 ClearView™ knowledge center supporting competence development

ClearView™ dashboards and fault models are designed to improve the fundamental understanding of plant operation for operators and engineers. In addition, ongoing interaction with the ClearView Service Manager and other Topsoe experts will further strengthen competence development of plant personnel. If further training is required from Topsoe Academy™ (not part of ClearView™ subscription fee), then it is possible to better design and tailor specific training programs, which reflect the operational challenges in the plant, that ClearView™ has identified.

12 IT Requirements

Prior to the Kickoff phase of the project, Tokai must:

- Electronically store plant process data in a commercially available data historian (such as OSI PI, Honeywell PHD, Aspen IP21, Yokogawa ExaQuantum, or similar) with its respective OPC Server that supports the OPC Foundation OPC DA v1.0a open standard or greater.
- Electronically store laboratory analytical data in a commercially available data historian or laboratory information management system (LIMS). If the analytic data is stored in a LIMS, that system must have an underlying relational database and it must allow the creation of a custom view for CONNECTED SERVICES purposes that will be queried using ODBC.
- Provide an SSL digital certificate used for authentication from a recognized certificate authority such as Symantec or DigiCert will be required.
- Provide an independent PC that can be connected to the data historian and LIMS using an Ethernet connection. This PC should also be able to access the internet for sending data files on a set schedule. The transfer system and schedule will be approved by Tokai before the connection goes live. The PC will require the following minimum specifications:

Hardware:

- 2 GHz Pentium 4 / Core 2 Duo
- 4 GB RAM
- 60 GB Hard Drive
- 17" SVGA color monitor with 1024x768 resolution
- Network Interface Card: Ethernet LAN 100/1000T
- Keyboard and Mouse
- The minimum hardware requirements are primarily driven by those needed by the operating system selected. The requirements above are based on Win7 OS. It is highly recommended that a separate physical machine be used for this service.

Software:

- Operating System

- Windows 2008 Server R2 (x64)
- Windows 2012 Server R2 (x64) – IIS 8.5
- Windows 7 Professional (x64)
- Windows 8.1 Professional (x64)
- Windows 10 Enterprise (x64)
- Internet access
- NTFS file system on C: drive
- IIS base install only

It is highly recommended that English is used for the operating system. Data collection software shall be supplied by HTAS as part of the CONNECTED SERVICES.

13 Remote DCS Commissioning Assistance

13.1 Preface

This specification defines the minimum requirements for having remote DCS assistance solutions during the commission phase for accessing Distributed Control System (DCS) and supporting plant operators using smart glasses.

The distributed control system is required for operation and supervision of the process plant, while the Emergency Shutdown System (ESD) is used for safety actions to protect personnel and equipment. The processes involved are continuous, and a high degree of reliability is essential.

With the existing DCS/SIS architecture at site, secure remote access makes it possible to ensure that process experts can advise optimum plant start-up, operation and help in troubleshoot remotely without any delays.

13.2 General

Remote assistance is an intuitive tool which gives our experts possibilities to monitor plant remotely and guide on need basis. Enabling plant start-up and operation is a critical requirement and considering travel restrictions, remote assistance can provide better alternate to access process experts.

13.3 Hardware

The Remote assist solution shall include the following items (as separate items, or in combination with other items):

- Computer machine available in client network with access to DCS and Internet (same PC as mentioned in Appendix 12 "IT Requirements". The PC will be used first for the Remote DCS Commissioning Assistance for viewing DCS during the commissioning phase and thereafter for the ClearView™ under the CONNECTED SERVICES)
- Realwear device and proposed application for field operation

13.4 Software

BeyondTrust application enables to handle situations where our engineers need to have a look at the DCS screens and plan/suggest further actions.

13.5 No VPN requirement

BeyondTrust works through firewall without VPN tunneling, so your perimeter security can remain intact. Outbound only session traffic uses TCP Port 443. BeyondTrust's infrastructure has very minimal port exposure.

13.6 Authentication

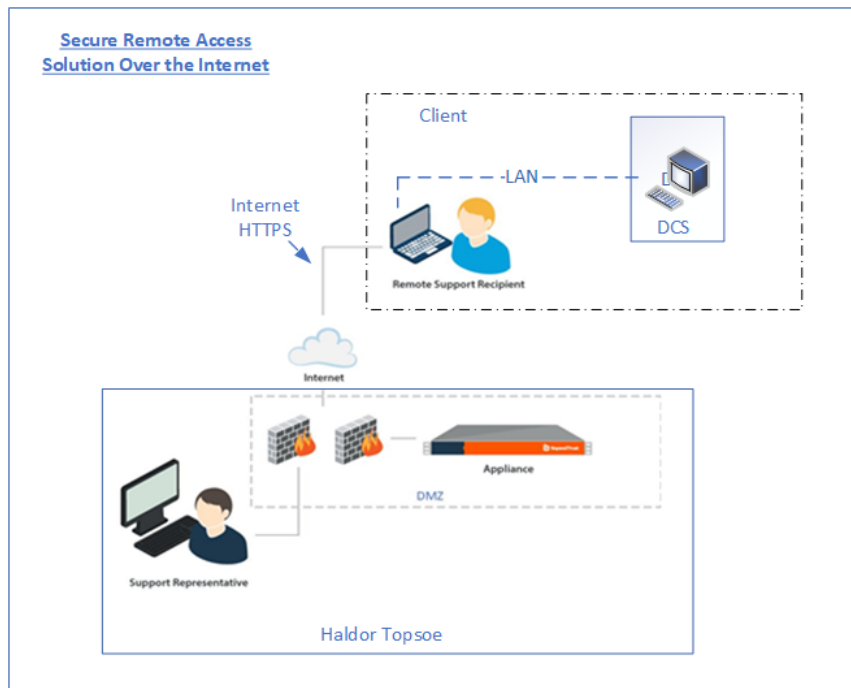
We are using two factor authentications leveraging our existing infrastructure and Azure cloud services for simple and secure user management.

13.7 Data Encryption

Remote Access is configured to enforces the use of SSL for every connection made to the site. BeyondTrust encrypts all data in transit using TLSv1.2 and 1.3.

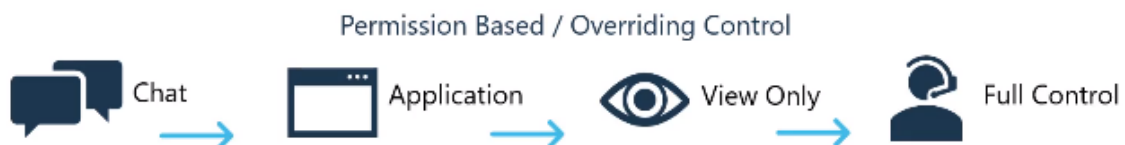
13.8 Session Logging

Session logging allows for the review of customer and support representative interactions, and all the events of an individual support session are logged as a text-based log. This log includes representatives involved, permissions granted by the customer, chat transcripts, system information, and any other actions taken by remote assistant.



Topsoe process expert can see the screen and work as if physically in front of the remote desktop, speeding time to resolution.

Permission based access control will work as:



BeyondTrust package shall be residing in the client machine, and shall not interfere with any other operations.

13.9 Initiating Remote session

The remote session to DCS viewer can be initiated in 2 ways :

1. Customer initiation: Customer can browse to <https://support.topsoe.com> and fill the required information, support desk receives the request and start the remote session.
2. Topsoe engineer can send remote session URL to client and client will open URL to start the remote session.

To start a remote session, a small 3 MB client setup will automatically be download. There is no additional hardware/software required at client side. We require only one PC connected with internet. Under normal condition internet connection speed with 2 Mbps will work.

13.10 Plant Operator

Our clients and engineers on site need to perform critical and complex tasks which may require expert advice.

Using a Realwear and supported application customers can connect to a Topsoe engineer.

The device is approved for ATEX & IECEx Zone 1 and CSA C1-D1 and is safe to deploy in hazardous areas.



The device is 100% hands free and is PPE compatible. It is build rugged, water resistant and even drop proof.

Using the Realwear HMT-1Z1, Image and video capture, video playback, document navigation and document storage can be done.

Fast, flexible and accurate response with convenient discussions and real time support without having physical presence.

- Common use cases will also include:
- Site inspection and walkthrough
- Quality inspection
- Emergency technical support
- Troubleshooting
- Instruct, mentor and train new engineers

From: [Dorthe Holland \[DOHO\]](#)
To: [Tran, Duc](#); [Bahr, Andrew](#)
Cc: [Geert Colding \[GC\]](#); [Nina Møhler \[NMO\]](#)
Subject: S-08447-HT-TCCB-E-024: Remote site supervision
Date: Thursday, August 6, 2020 9:35:58 AM
Attachments: [IN-4010-EN.pdf](#)
[IN-4001-EN.pdf](#)

Duc

Based on your request for starting site supervision end September / beginning of October we in the current situation with travel restriction can offer remote assistance. In the two attached instruction – one more general and one for WSA condenser bricklining - you can see how this is handled from our side.

The tasks as of now where our supervision is required is as I see it the below:

- Bricklining of the WSA condenser
- Bricklining of the acid concentrator
- Tube module assembly
- Tube module installation

Beside the remote assistance we for critical task can support the site with qualified assistance from our Houston office.

We have recently conducted remote supervision for bricklining at a site in China with success and one more is on-going at the moment. Likewise with success we have also lately conducted a module installation with remote supervision for at site in South Africa. For all these remote takes preparation and training of the staff involved in doing the job has been required and detail planning must be done and agreed upon before the jobs can start. Our senior supervisor who has organized and conducted the above mention supervisions will be allocate for the remote supervision on your site. However he is on vacation until 24 August, so it will not be appropriate to start the detailed planning of the work before he is back and his experience can be included in the preparations.

Said so for all the remote activities communication with the site is crucial, so it is important to make sure web cameras or alike as well as reliable internet connections is available and tested. Further for the bricklining task references from the contractor who will carry out the job at site is required as described in the instruction IN-4001. Since I'll be away for the next two week I suggest you consider how the communication can be conducted during the remote supervision and also call for a meeting with Geert to start the initial process for the practical planning.

When I am back at the office we can return to the detailed planning and elaborate further on the terms and conditions for the remote supervision.

If you have any question he above I'll still be at office tomorrow for a call

Best regards

Dorthe Holland

Project Manager | GSU | Technology Solutions

Haldor Topsøe A/S

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Read more at www.topsoe.com

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DSB remote supervision - Site installation of acid resistant bricklining s...

Resp: gc

Checker: skya

Approver: skya

Status: Published

1 / 5

Objective

This instruction describes the technical pre-conditions and suggested procedures to be followed in relation to remote supervision by DSB of installation of acid resistant bricklining systems on site in Topsoe environmental plants.

The term “remote” implies that the DSB supervisor(s) are located off-site, and the supervision services are solely provided via digital communication platforms and web-cameras.

DSB supplies acid resistant bricklining materials for Topsoe environmental plants (WSA or SNOX), and supervision of installation by DSB is a pre-condition for obtaining an acceptable quality of the completed system.

Scope

This instruction is valid for all Topsoe environmental plants, where remote supervision by DSB is considered.

Responsibility

The WSA&HDP group (GSU) is responsible for this instruction.

Input

NA

Description

See the following pages.

Parties involved

The following parties are referred to in this instruction:

- Customer: Topsoe’s contractual partner. The customer may be the end-user.
- DI: Design institute (typically engaged by customer on Chinese projects).
The DI may be the customer.
- Contractor Company doing the acid resistant bricklining work on site.
- DSB: Didier Säurebau GmbH, Germany
- Topsoe: Haldor Topsoe -
PM = Project manager
MJE = Mechanical job engineer (lead mechanical engineer)

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DSB remote supervision - Site installation of acid resistant bricklining s...

Resp: gc

Checker: skya

Approver: skya

Status: Published

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Supervisor = Responsible for the remote supervision activities.

The representative may be from Topsoe, Denmark (head quarters), or any regional office.

RO-coordinator = Coordinator from a Regional Topsoe office (optional)

Regional offices:

HTCN = Haldor Topsoe, Beijing office, China

HTM = Haldor Topsoe, Moscow office, Russia

HTAL = Haldor Topsoe, Buenos Aires office, Argentina

HTIN = Haldor Topsoe, New Delhi office, India

HTI = Haldor Topsoe, Houston office, USA

Pre-conditions

The following pre-conditions are considered necessary, in order to be able to obtain an acceptable quality of the bricklining system:

- Qualified contractor having extensive experience with installation of acid resistant bricklining systems.
The potential contractor(s) must provide:
 - Description of the company.
 - Reference list for installation of similar acid resistant bricklining systems.
 - List of available workers and their previous experience with acid resistant bricklining work.
- Topsoe/DSB reserves the right to dismiss un-qualified persons or require additional qualified persons at any time during the installation work.
- Topsoe/DSB reserves the right to stop all or part of the work on site, in case of a longer internet connection failure. Such decision will depend on the actual ongoing activities.
- A qualified contact person from the contractor, working on site, having sufficient English language skills to be able to communicate smoothly with the DSB supervisor.
- Availability of DSB supervisor(s) during 3-4 site working hours, which is considered sufficient based on previous experience.
- Access by the contractor to one or more web-cameras capable of providing high quality photos, videos and live-streaming.

Continuous on-site live coverage of the working areas is recommended by one or more web-cameras depending on the size and location of the working areas.

- On-site internet connections suitable for allowing web-based meetings and live streaming.
- For some projects - a dedicated RO-coordinator can be appointed to follow the work on site and ensure smooth communication between the parties involved.

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DSB remote supervision - Site installation of acid resistant bricklining s...

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Approver: skya

Status: Published

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- In particular for Chinese projects - a dedicated coordinator from HTCEN is foreseen to follow the work on site closely and ensure smooth communication between the parties involved.

The HTCEN coordinator is also foreseen to check the steel parts before the bricklining work is commenced, and to participate in the final dimensional check of the completed bricklining.

Procedures

The below procedures / activities are foreseen in relation to performing remote supervision by DSB.

Activities 1-5 must take place before work is commenced on site.

Activity	Description	Participants
1. Pre-qualification meeting Topsoe-PM will arrange for this meeting. (via MS-Teams, Skype or similar)	Meeting to discuss and explore the foreseen contractor's previous experience with installation of acid resistant bricklining systems. Discuss potential communication platforms that will work for all parties involved.	<ul style="list-style-type: none"> Potential contractor Customer / DI DSB – expert supervisor / sales manager Topsoe – PM / MJE / RO-coordinator
2. Internet connection Topsoe-PM will arrange for this test.	Check of site internet connection – trial web-based site meeting and trial web-camera live streaming. Agree on suitability of digital meeting platform and selected web camera.	<ul style="list-style-type: none"> Contractor / customer / DI DSB supervisor Topsoe – MJE / RO-coordinator
3. DSB instructions DSB will upload.	When the commercial parts have been finalized, the DSB working instructions and related QA documents are made available to the selected contractor for his preparation and planning of the work. A suitable (safe) platform will be selected for sharing these documents. The documents will only be available for a limited period of time.	<ul style="list-style-type: none"> Contractor / customer / DI DSB Topsoe - MJE / RO-coordinator
4. Kick-off meeting Topsoe-PM will arrange for this meeting. (via MS-Teams, Skype or similar)	Tentative agenda: <ul style="list-style-type: none"> Presentation of the parties involved and key contact persons. Review of the number and qualifications of persons planned to be used for the installation work. Review of site preparations required as per the DSB mobilization manual. 	<ul style="list-style-type: none"> Contractor / customer / DI DSB supervisor Topsoe – PM / MJE / RO-coordinator

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DSB remote supervision - Site installation of acid resistant bricklining s...

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Activity	Description	Participants
	<ul style="list-style-type: none"> Agree on the communication platform(s) to be used. Agree on procedures and planned meetings during the installation work – see also points 6 and 7. Agree on the procedures to be followed in case of longer internet connection failure. The following is suggested: <ul style="list-style-type: none"> Phone contact is established – Contractor <-> Topsoe <-> DSB Agree on how to proceed based on ongoing activities. Agree on number of web-cameras to be permanently installed, and number to be available for specific coverage. The following number of cameras is recommended as minimum: <ul style="list-style-type: none"> 1 pc inside each equipment section being worked in. 1 pc in cutting/mixing area. 1 pc helmet mounted for specific coverage. Agree on on-site working hours and availability of DSB supervisor and RO-coordinator, if involved. Presentation of working instructions and QA documentation by DSB, and clarification of any questions. Presentation and discussion of the ITP. 	
5. Safety meeting DSB will arrange for this meeting. (via MS-Teams, Skype or similar)	DSB to present the various materials involved with focus on hazardous materials and the related MSDS'. Required PPE to be discussed and agreed upon. Required work place set-up to be discussed and agreed upon.	<ul style="list-style-type: none"> Contractor / customer / DI DSB supervisor RO-coordinator

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DSB remote supervision - Site installation of acid resistant bricklining s...

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Status: Published

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Activity	Description	Participants
6. Daily morning meetings / daily activities Contractor / customer / DI will arrange for these meetings. (via MS-Teams, Skype or similar)	Daily meeting to discuss previous day's work, the worked planned for the day and any problems encountered. It should be noted that DSB should be available for calls at any time during site working hours, in case the contractor needs guidance. The contractor must fill-out and submit QA documents to DSB for approval as the various activities are completed. The RO-coordinator will, if involved, verify the completion of these activities.	<ul style="list-style-type: none"> Contractor / customer / DI DSB supervisor RO-coordinator
7. Hold-point meetings Contractor / customer / DI will arrange for these meetings. (via MS-Teams, Skype or similar)	All hold-points must be cleared in meetings – the daily meetings or separate meetings depending on progress. Contractor to document completion of activity by photos or videos, and related QA document(s). If DSB is in doubt of quality or want to explore certain details, live video streaming can be required by DSB, who should then be able to remotely control what to be live video documented.	<ul style="list-style-type: none"> Contractor (customer / DI) DSB supervisor RO-coordinator
8. Final meeting Contractor / customer / DI will arrange for this meeting. (via MS-Teams, Skype or similar)	Final meeting to wrap-up all activities and related QA documentation. Final acceptance of installation work.	<ul style="list-style-type: none"> Contractor (customer / DI) DSB supervisor Topsoe – PM / MJE / RO-coordinator

Output

Output for this instruction is completion of remote supervision by DSB of installation of acid resistant bricklining.

Only for editorial purpose

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Remote supervision - Site installation of Topsoe environmental plants

Resp: gc

Checker: skya

Approver: skya

Status: Published

1 / 5

Objective

This instruction describes the technical pre-conditions and suggested procedures to be followed in relation to remote supervision by Topsoe of site installation of Topsoe environmental plants.

The term “remote” implies that the Topsoe supervisor(s) is located off-site, and the supervision services are solely provided via digital communication platforms and web-cameras.

Topsoe supplies equipment and materials for Topsoe environmental plants, and supervision of installation by Topsoe is a pre-condition for obtaining an acceptable quality of the completed system.

The site installation activities will typically include:

- WSA condenser casing – general check, dimensional check, and check of surface quality / roundings of acid collector.
- WSA condenser internals – tube modules and top covers.

Installation of acid resistant bricklining, remotely supervised, is covered by IN-4001.

- General check of plant, including insulation and support details.

Scope

This instruction is valid for all Topsoe environmental plants, where remote supervision by Topsoe is considered.

Responsibility

The WSA&HDP group (GSU) is responsible for this instruction.

Input

Input to this instruction is the need of remote supervision related to erection of Topsoe environmental plants.

Description

See the following pages.

Remote supervision - Site installation of Topsoe environmental plants

Resp: gc

Checker: skya

Approver: skya

Status: Published

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Parties involved

The following parties are referred to in this instruction:

- Customer: Topsoe's contractual partner. The customer may be the end-user.
 - DI: Design institute (typically engaged by client on Chinese projects).
The DI may be the client.
 - Contractor Company responsible for the mechanical site installation activities – typically engaged by client.
 - Topsoe: Haldor Topsoe -
 - PM = Project manager
 - MJE = Mechanical job engineer (lead mechanical engineer)
 - Supervisor = Responsible for the remote supervision activities.

The representative may be from Topsoe, Denmark (head quarters), or any regional office.
 - RO coordinator = Coordinator from a Regional Topsoe office (optional)
- Regional offices:
- HTCN = Haldor Topsoe, Beijing office, China
 - HTM = Haldor Topsoe, Moscow office, Russia
 - HTAL = Haldor Topsoe, Buenos Aires office, Argentina
 - HTIN = Haldor Topsoe, New Delhi office, India
 - HTI = Haldor Topsoe, Houston office, USA

Pre-conditions

The following pre-conditions are considered necessary, to be able to obtain an acceptable quality of the equipment / materials installed:

- Qualified contractor having extensive experience with installation of process plants.
- Topsoe reserves the right to pause the work on site being supervised, in case of a longer internet connection failure. Such decision will depend on the actual ongoing activities.
- A qualified contact person from the contractor, working on site, having sufficient English language skills to be able to communicate smoothly with the Topsoe supervisor.
- Availability of the Topsoe supervisor(s) during 3-4 site working hours (estimated), depending on actual ongoing site activities.

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Remote supervision - Site installation of Topsoe environmental plants

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- Access by the contractor to one or more web-cameras capable of providing high quality photos, videos and live-streaming.

Continuous on-site live coverage of the working areas is recommended by one or more web-cameras depending on the size and location of the working areas.

- On-site internet connections suitable for allowing web-based meetings and live streaming.
- For some projects - a dedicated RO-coordinator can be appointed to follow the work on site and ensure smooth communication between the parties involved.

Procedures

The below procedures / activities are foreseen in relation to performing remote supervision by Topsoe.

Activities 1-2 must take place before installation work is commenced on site.

Activity	Description	Participants
1. Pre-meeting / Internet connection Topsoe-PM will arrange for this meeting. (via MS-Teams, Skype or similar)	Discuss and agree on communication platforms that will work for all parties involved. Check of site internet connection – trial web-based site meeting and trial web-camera live streaming.	<ul style="list-style-type: none"> • Contractor / customer / DI • Topsoe – PM / MJE / Supervisor / (RO-coordinator)
2. Kick-off meeting Topsoe-PM will arrange for this meeting. (via MS-Teams, Skype or similar)	Tentative agenda: <ul style="list-style-type: none"> • Presentation of the parties involved and key contact persons. • Review of the number and qualifications of persons planned to be used for the installation work. • Presentation of relevant Topsoe specifications. • Review of site preparations required as per the relevant Topsoe specifications. • Agree on procedures and planned meetings during the installation work – see also points 3 and 4. • Agree on the procedures to be followed in case of longer internet connection failure. The following is suggested: <ul style="list-style-type: none"> ○ Phone contact is established – 	<ul style="list-style-type: none"> • Contractor / customer / DI • Topsoe – PM / MJE / Supervisor / (RO-coordinator)

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Remote supervision - Site installation of Topsoe environmental plants

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Activity	Description	Participants
	<p>Contractor <-> Topsoe supervisor</p> <ul style="list-style-type: none"> ○ Agree on how to proceed based on ongoing activities. • Agree on number of web-cameras to be permanently installed, and number to be available for specific coverage. <p>The following number of cameras is recommended as minimum:</p> <ul style="list-style-type: none"> ○ 1 pc inside each equipment section being worked in. ○ 1 pc in special assembly areas. ○ 1 pc helmet mounted for specific coverage. • Agree on on-site working hours and availability of Topsoe supervisor(s), and RO-coordinator if relevant. 	
<p>3.</p> <p>Daily meetings / daily activities</p> <p>Contractor / customer / DI will arrange for these meetings.</p> <p>(via MS-Teams, Skype or similar)</p>	<p>Daily meeting to discuss previous day's work, the worked planned for the day and any problems encountered.</p> <p>It should be noted that the Topsoe supervisor(s) should be available for calls at any time during site working hours, in case the contractor needs guidance.</p> <p>The contractor must document the progress and quality of the work performed by photos and/or videos.</p> <p>The RO-coordinator, if available, will verify these activities.</p>	<ul style="list-style-type: none"> • Contractor / customer / DI • Topsoe supervisor • (RO-coordinator)
<p>4.</p> <p>End-of-activity meetings</p> <p>Contractor / customer / DI will arrange for these meetings.</p> <p>(via MS-Teams, Skype or similar)</p>	<p>Completion of activities as described in Topsoe erection specifications must be cleared in meetings – the daily meetings or separate meetings depending on progress.</p> <p>The contractor must document the completion of activities by photos and/or videos.</p> <p>If the Topsoe supervisor is in doubt of quality or want to explore certain details, live video streaming can be required by the supervisor, who should then be able to remotely control what to be live video documented.</p>	<ul style="list-style-type: none"> • Contractor (customer / DI) • Topsoe supervisor • (RO-coordinator)

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Remote supervision - Site installation of Topsoe environmental plants

Resp: gc

Checker: skya

Approver: skya

Status: Published

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Activity	Description	Participants
5. Final meeting Contractor / customer / DI will arrange for this meeting. (via MS-Teams, Skype or similar)	Final meeting to wrap-up all activities and related conclusions. Final acceptance of installation work.	<ul style="list-style-type: none">• Contractor (customer / DI)• Topsoe supervisor• Topsoe – PM / MJE / Supervisor / (RO-coordinator)

Output

Output for this instruction is completion of remote supervision related to erection of Topsoe environmental plants.

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DSB remote supervision - Site installation of acid resistant bricklining s...

Resp: gc

Checker: skya

Approver: skya

Status: Published

1 / 5

Objective

This instruction describes the technical pre-conditions and suggested procedures to be followed in relation to remote supervision by DSB of installation of acid resistant bricklining systems on site in Topsoe environmental plants.

The term “remote” implies that the DSB supervisor(s) are located off-site, and the supervision services are solely provided via digital communication platforms and web-cameras.

DSB supplies acid resistant bricklining materials for Topsoe environmental plants (WSA or SNOX), and supervision of installation by DSB is a pre-condition for obtaining an acceptable quality of the completed system.

Scope

This instruction is valid for all Topsoe environmental plants, where remote supervision by DSB is considered.

Responsibility

The WSA&HDP group (GSU) is responsible for this instruction.

Input

NA

Description

See the following pages.

Parties involved

The following parties are referred to in this instruction:

- Customer: Topsoe’s contractual partner. The customer may be the end-user.
- DI: Design institute (typically engaged by customer on Chinese projects).
The DI may be the customer.
- Contractor Company doing the acid resistant bricklining work on site.
- DSB: Didier Säurebau GmbH, Germany
- Topsoe: Haldor Topsoe -
PM = Project manager
MJE = Mechanical job engineer (lead mechanical engineer)

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DSB remote supervision - Site installation of acid resistant bricklining s...

Resp: gc

Checker: skya

Approver: skya

Status: Published

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Supervisor = Responsible for the remote supervision activities.

The representative may be from Topsoe, Denmark (head quarters), or any regional office.

RO-coordinator = Coordinator from a Regional Topsoe office (optional)

Regional offices:

HTCN = Haldor Topsoe, Beijing office, China

HTM = Haldor Topsoe, Moscow office, Russia

HTAL = Haldor Topsoe, Buenos Aires office, Argentina

HTIN = Haldor Topsoe, New Delhi office, India

HTI = Haldor Topsoe, Houston office, USA

Pre-conditions

The following pre-conditions are considered necessary, in order to be able to obtain an acceptable quality of the bricklining system:

- Qualified contractor having extensive experience with installation of acid resistant bricklining systems.
The potential contractor(s) must provide:
 - Description of the company.
 - Reference list for installation of similar acid resistant bricklining systems.
 - List of available workers and their previous experience with acid resistant bricklining work.
- Topsoe/DSB reserves the right to dismiss un-qualified persons or require additional qualified persons at any time during the installation work.
- Topsoe/DSB reserves the right to stop all or part of the work on site, in case of a longer internet connection failure. Such decision will depend on the actual ongoing activities.
- A qualified contact person from the contractor, working on site, having sufficient English language skills to be able to communicate smoothly with the DSB supervisor.
- Availability of DSB supervisor(s) during 3-4 site working hours, which is considered sufficient based on previous experience.
- Access by the contractor to one or more web-cameras capable of providing high quality photos, videos and live-streaming.

Continuous on-site live coverage of the working areas is recommended by one or more web-cameras depending on the size and location of the working areas.

- On-site internet connections suitable for allowing web-based meetings and live streaming.
- For some projects - a dedicated RO-coordinator can be appointed to follow the work on site and ensure smooth communication between the parties involved.

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DSB remote supervision - Site installation of acid resistant bricklining s...

Resp: gc

Checker: skya

Approver: skya

Status: Published

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- In particular for Chinese projects - a dedicated coordinator from HTCEN is foreseen to follow the work on site closely and ensure smooth communication between the parties involved.

The HTCEN coordinator is also foreseen to check the steel parts before the bricklining work is commenced, and to participate in the final dimensional check of the completed bricklining.

Procedures

The below procedures / activities are foreseen in relation to performing remote supervision by DSB.

Activities 1-5 must take place before work is commenced on site.

Activity	Description	Participants
1. Pre-qualification meeting Topsoe-PM will arrange for this meeting. (via MS-Teams, Skype or similar)	Meeting to discuss and explore the foreseen contractor's previous experience with installation of acid resistant bricklining systems. Discuss potential communication platforms that will work for all parties involved.	<ul style="list-style-type: none"> Potential contractor Customer / DI DSB – expert supervisor / sales manager Topsoe – PM / MJE / RO-coordinator
2. Internet connection Topsoe-PM will arrange for this test.	Check of site internet connection – trial web-based site meeting and trial web-camera live streaming. Agree on suitability of digital meeting platform and selected web camera.	<ul style="list-style-type: none"> Contractor / customer / DI DSB supervisor Topsoe – MJE / RO-coordinator
3. DSB instructions DSB will upload.	When the commercial parts have been finalized, the DSB working instructions and related QA documents are made available to the selected contractor for his preparation and planning of the work. A suitable (safe) platform will be selected for sharing these documents. The documents will only be available for a limited period of time.	<ul style="list-style-type: none"> Contractor / customer / DI DSB Topsoe - MJE / RO-coordinator
4. Kick-off meeting Topsoe-PM will arrange for this meeting. (via MS-Teams, Skype or similar)	Tentative agenda: <ul style="list-style-type: none"> Presentation of the parties involved and key contact persons. Review of the number and qualifications of persons planned to be used for the installation work. Review of site preparations required as per the DSB mobilization manual. 	<ul style="list-style-type: none"> Contractor / customer / DI DSB supervisor Topsoe – PM / MJE / RO-coordinator

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DSB remote supervision - Site installation of acid resistant bricklining s...

Resp: gc

Checker: skya

Approver: skya

Status: Published

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Activity	Description	Participants
	<ul style="list-style-type: none"> Agree on the communication platform(s) to be used. Agree on procedures and planned meetings during the installation work – see also points 6 and 7. Agree on the procedures to be followed in case of longer internet connection failure. The following is suggested: <ul style="list-style-type: none"> Phone contact is established – Contractor <-> Topsoe <-> DSB Agree on how to proceed based on ongoing activities. Agree on number of web-cameras to be permanently installed, and number to be available for specific coverage. The following number of cameras is recommended as minimum: <ul style="list-style-type: none"> 1 pc inside each equipment section being worked in. 1 pc in cutting/mixing area. 1 pc helmet mounted for specific coverage. Agree on on-site working hours and availability of DSB supervisor and RO-coordinator, if involved. Presentation of working instructions and QA documentation by DSB, and clarification of any questions. Presentation and discussion of the ITP. 	
5. Safety meeting DSB will arrange for this meeting. (via MS-Teams, Skype or similar)	DSB to present the various materials involved with focus on hazardous materials and the related MSDS'. Required PPE to be discussed and agreed upon. Required work place set-up to be discussed and agreed upon.	<ul style="list-style-type: none"> Contractor / customer / DI DSB supervisor RO-coordinator

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DSB remote supervision - Site installation of acid resistant bricklining s...

Resp: gc

Checker: skya

Approver: skya

Status: Published

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Activity	Description	Participants
6. Daily morning meetings / daily activities Contractor / customer / DI will arrange for these meetings. (via MS-Teams, Skype or similar)	Daily meeting to discuss previous day's work, the worked planned for the day and any problems encountered. It should be noted that DSB should be available for calls at any time during site working hours, in case the contractor needs guidance. The contractor must fill-out and submit QA documents to DSB for approval as the various activities are completed. The RO-coordinator will, if involved, verify the completion of these activities.	<ul style="list-style-type: none"> Contractor / customer / DI DSB supervisor RO-coordinator
7. Hold-point meetings Contractor / customer / DI will arrange for these meetings. (via MS-Teams, Skype or similar)	All hold-points must be cleared in meetings – the daily meetings or separate meetings depending on progress. Contractor to document completion of activity by photos or videos, and related QA document(s). If DSB is in doubt of quality or want to explore certain details, live video streaming can be required by DSB, who should then be able to remotely control what to be live video documented.	<ul style="list-style-type: none"> Contractor (customer / DI) DSB supervisor RO-coordinator
8. Final meeting Contractor / customer / DI will arrange for this meeting. (via MS-Teams, Skype or similar)	Final meeting to wrap-up all activities and related QA documentation. Final acceptance of installation work.	<ul style="list-style-type: none"> Contractor (customer / DI) DSB supervisor Topsoe – PM / MJE / RO-coordinator

Output

Output for this instruction is completion of remote supervision by DSB of installation of acid resistant bricklining.

Only for editorial purpose

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Remote supervision - Site installation of Topsoe environmental plants

Resp: gc

Checker: skya

Approver: skya

Status: Published

1 / 5

Objective

This instruction describes the technical pre-conditions and suggested procedures to be followed in relation to remote supervision by Topsoe of site installation of Topsoe environmental plants.

The term “remote” implies that the Topsoe supervisor(s) is located off-site, and the supervision services are solely provided via digital communication platforms and web-cameras.

Topsoe supplies equipment and materials for Topsoe environmental plants, and supervision of installation by Topsoe is a pre-condition for obtaining an acceptable quality of the completed system.

The site installation activities will typically include:

- WSA condenser casing – general check, dimensional check, and check of surface quality / roundings of acid collector.
- WSA condenser internals – tube modules and top covers.

Installation of acid resistant bricklining, remotely supervised, is covered by IN-4001.

- General check of plant, including insulation and support details.

Scope

This instruction is valid for all Topsoe environmental plants, where remote supervision by Topsoe is considered.

Responsibility

The WSA&HDP group (GSU) is responsible for this instruction.

Input

Input to this instruction is the need of remote supervision related to erection of Topsoe environmental plants.

Description

See the following pages.

Remote supervision - Site installation of Topsoe environmental plants

Resp: gc

Checker: skya

Approver: skya

Status: Published

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Parties involved

The following parties are referred to in this instruction:

- Customer: Topsoe's contractual partner. The customer may be the end-user.
 - DI: Design institute (typically engaged by client on Chinese projects).
The DI may be the client.
 - Contractor Company responsible for the mechanical site installation activities – typically engaged by client.
 - Topsoe: Haldor Topsoe -
 - PM = Project manager
 - MJE = Mechanical job engineer (lead mechanical engineer)
 - Supervisor = Responsible for the remote supervision activities.

The representative may be from Topsoe, Denmark (head quarters), or any regional office.
 - RO coordinator = Coordinator from a Regional Topsoe office (optional)
- Regional offices:
- HTCN = Haldor Topsoe, Beijing office, China
 - HTM = Haldor Topsoe, Moscow office, Russia
 - HTAL = Haldor Topsoe, Buenos Aires office, Argentina
 - HTIN = Haldor Topsoe, New Delhi office, India
 - HTI = Haldor Topsoe, Houston office, USA

Pre-conditions

The following pre-conditions are considered necessary, to be able to obtain an acceptable quality of the equipment / materials installed:

- Qualified contractor having extensive experience with installation of process plants.
- Topsoe reserves the right to pause the work on site being supervised, in case of a longer internet connection failure. Such decision will depend on the actual ongoing activities.
- A qualified contact person from the contractor, working on site, having sufficient English language skills to be able to communicate smoothly with the Topsoe supervisor.
- Availability of the Topsoe supervisor(s) during 3-4 site working hours (estimated), depending on actual ongoing site activities.

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Remote supervision - Site installation of Topsoe environmental plants

Resp: gc

Checker: skya

Approver: skya

Status: Published

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- Access by the contractor to one or more web-cameras capable of providing high quality photos, videos and live-streaming.

Continuous on-site live coverage of the working areas is recommended by one or more web-cameras depending on the size and location of the working areas.

- On-site internet connections suitable for allowing web-based meetings and live streaming.
- For some projects - a dedicated RO-coordinator can be appointed to follow the work on site and ensure smooth communication between the parties involved.

Procedures

The below procedures / activities are foreseen in relation to performing remote supervision by Topsoe.

Activities 1-2 must take place before installation work is commenced on site.

Activity	Description	Participants
1. Pre-meeting / Internet connection Topsoe-PM will arrange for this meeting. (via MS-Teams, Skype or similar)	Discuss and agree on communication platforms that will work for all parties involved. Check of site internet connection – trial web-based site meeting and trial web-camera live streaming.	<ul style="list-style-type: none"> • Contractor / customer / DI • Topsoe – PM / MJE / Supervisor / (RO-coordinator)
2. Kick-off meeting Topsoe-PM will arrange for this meeting. (via MS-Teams, Skype or similar)	Tentative agenda: <ul style="list-style-type: none"> • Presentation of the parties involved and key contact persons. • Review of the number and qualifications of persons planned to be used for the installation work. • Presentation of relevant Topsoe specifications. • Review of site preparations required as per the relevant Topsoe specifications. • Agree on procedures and planned meetings during the installation work – see also points 3 and 4. • Agree on the procedures to be followed in case of longer internet connection failure. The following is suggested: <ul style="list-style-type: none"> ○ Phone contact is established – 	<ul style="list-style-type: none"> • Contractor / customer / DI • Topsoe – PM / MJE / Supervisor / (RO-coordinator)

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Remote supervision - Site installation of Topsoe environmental plants

Resp: gc

Checker: skya

Approver: skya

Status: Published

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Activity	Description	Participants
	<p>Contractor <-> Topsoe supervisor</p> <ul style="list-style-type: none"> ○ Agree on how to proceed based on ongoing activities. • Agree on number of web-cameras to be permanently installed, and number to be available for specific coverage. <p>The following number of cameras is recommended as minimum:</p> <ul style="list-style-type: none"> ○ 1 pc inside each equipment section being worked in. ○ 1 pc in special assembly areas. ○ 1 pc helmet mounted for specific coverage. • Agree on on-site working hours and availability of Topsoe supervisor(s), and RO-coordinator if relevant. 	
<p>3.</p> <p>Daily meetings / daily activities</p> <p>Contractor / customer / DI will arrange for these meetings.</p> <p>(via MS-Teams, Skype or similar)</p>	<p>Daily meeting to discuss previous day's work, the worked planned for the day and any problems encountered.</p> <p>It should be noted that the Topsoe supervisor(s) should be available for calls at any time during site working hours, in case the contractor needs guidance.</p> <p>The contractor must document the progress and quality of the work performed by photos and/or videos.</p> <p>The RO-coordinator, if available, will verify these activities.</p>	<ul style="list-style-type: none"> • Contractor / customer / DI • Topsoe supervisor • (RO-coordinator)
<p>4.</p> <p>End-of-activity meetings</p> <p>Contractor / customer / DI will arrange for these meetings.</p> <p>(via MS-Teams, Skype or similar)</p>	<p>Completion of activities as described in Topsoe erection specifications must be cleared in meetings – the daily meetings or separate meetings depending on progress.</p> <p>The contractor must document the completion of activities by photos and/or videos.</p> <p>If the Topsoe supervisor is in doubt of quality or want to explore certain details, live video streaming can be required by the supervisor, who should then be able to remotely control what to be live video documented.</p>	<ul style="list-style-type: none"> • Contractor (customer / DI) • Topsoe supervisor • (RO-coordinator)

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Remote supervision - Site installation of Topsoe environmental plants

Resp: gc

Checker: skya

Approver: skya

Status: Published

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Activity	Description	Participants
5. Final meeting Contractor / customer / DI will arrange for this meeting. (via MS-Teams, Skype or similar)	Final meeting to wrap-up all activities and related conclusions. Final acceptance of installation work.	<ul style="list-style-type: none">• Contractor (customer / DI)• Topsoe supervisor• Topsoe – PM / MJE / Supervisor / (RO-coordinator)

Output

Output for this instruction is completion of remote supervision related to erection of Topsoe environmental plants.

Only for editorial purpose

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